

SPECIALIST REPORT:
RECREATION
BORDERTOWN TO CALIFORNIA
120 KV TRANSMISSION LINE PROJECT

SIERRA COUNTY, CALIFORNIA
AND
WASHOE COUNTY, NEVADA

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LIST OF ACRONYMS

BLM	Bureau of Land Management
CFR	Code of Federal Regulations
CIAA	Cumulative Impacts Analysis Area
COM	Construction, Operation, and Maintenance (Plan)
DEIS	Draft Environmental Impact Statement
EIS	Environmental Impact Statement
FSH	Forest Service Handbook
kV	Kilovolt
MVUM	Motor Vehicle Use Map
NEPA	National Environmental Policy Act of 1969
NFS	National Forest System
NOI	Notice of Intent
OHV	Off-Highway Vehicle
PPOD	Preliminary Plan of Development
PRMP	Eagle Lake Field Office Proposed Resource Management Plan and Final EIS
ROS	Recreation Opportunity Spectrum
ROW	Right-of-way
SF	Standard Form
SPCC	Spill Prevention, Control, and Countermeasures (Plan)
SUP	Special Use Permit
SWPPP	Storm Water Pollution Prevention Plan
USFS	U.S. Department of Agriculture, Forest Service

**SPECIALIST REPORT:
RECREATION
BORDERTOWN TO CALIFORNIA
120 KV TRANSMISSION LINE PROJECT**

1.0 INTRODUCTION

NV Energy, Inc. (NV Energy) filed a Standard Form (SF) 299 Application for Transportation and Utility System and Facilities on Federal Lands with the U.S. Department of Agriculture, Forest Service (USFS), Carson Ranger District, and the U.S. Department of the Interior, U.S. Bureau of Land Management (BLM), Eagle Lake Field Office. The application was submitted seeking authorization to construct, operate, and maintain a 120-kilovolt (kV) transmission line, which is referred to as the Bordertown to California 120 kV Transmission Line Project (proposed project).

1.1 PURPOSE OF SPECIALIST REPORT

The purpose of this specialist report is to characterize the existing recreation resources within the potentially affected area and to analyze and disclose potential effects on the recreation resources that would occur under implementation of the action alternatives and the No Action Alternative, as described in **Section 1.3** of this specialist report. This report also describes specific design features that would be implemented under the action alternatives in order to reduce or avoid potential impacts on recreation resources. The data and effects analysis in this specialist report will be used to support an Environmental Impact Statement (EIS) that is being prepared by the USFS pursuant to Section 102 of the National Environmental Policy Act of 1969 (NEPA). The USFS, Carson Ranger District is the lead agency. The BLM, Eagle Lake Field Office is a cooperating agency in the preparation of the EIS, and several state and local agencies are also participating as cooperating agencies.

This specialist report focuses on the recreation resources on National Forest System (NFS) land within the potentially affected area. There are also BLM-administered public lands and private land that may be impacted by the proposed project and thus the resources on these lands are also discussed in this specialist report.

1.2 PROPOSED PROJECT

Sections of the proposed transmission line that would cross NFS land or public land administered by the BLM would be constructed, and then operated and maintained within a right-of-way (ROW). The ROW would be a strip of land that measures 45 feet in width on either side of the proposed transmission line alignment, making the total width 90 feet. Because the ROW boundary would be equidistance from either side of the transmission line alignment, the alignment is effectively the longitudinal centerline of the ROW. Sections of the proposed

transmission line that would cross private land would be constructed, operated, and maintained within easements. NV Energy would provide financial compensation for easements to private owners as determined by a qualified third-party appraiser, through negotiations, or through the courts. Easements would also be 90 feet wide, measured 45 feet in width on either side of the alignment.

The proposed project consists of:

- the construction, operation and maintenance of a 120 kV overhead transmission line between the existing Bordertown and California substations in Sierra County, California;
- modifications and improvements to both substations for accommodating the addition of the proposed transmission line, including expansion of the existing boundary of the Bordertown Substation facility; and,
- widening of existing roads and construction of new temporary access roads necessary for construction and maintenance of the proposed transmission line.

The proposed transmission line would consist of bundled aluminum conductor steel-reinforced cable supported on single circuit pole structures. A combination of single-pole structures, two-pole H-frame structures, and three-pole dead end/angle structures would be used for the proposed transmission line. Single-pole structures would be used less frequently because they would generally be used only where confined space prevents the use of the wider two-pole H-frame or three-pole dead end/angle structures. Single pole structures would be approximately 60 to 90 feet tall, depending on terrain and obstructions. The two-pole H-frame structures and the three-pole dead-end/angle structures would be approximately 50 to 90 feet tall, depending on terrain or obstructions. The span distance between the poles would typically average 800 feet but could range from 200 feet to 2,000 feet depending on terrain or obstructions. Weathered steel, characterized by a stable, rust-like finish that closely resembles the color of wood poles, would be used for all poles.

1.2.1 Project Construction

Construction of the proposed transmission line would consist of the establishment of staging areas, pole sites, and transmission wire setup sites; the construction of access roads, including widening existing roads; and, the installation of the pole structures and conductor and shield wires. The exact location of these project elements would be determined prior to construction. See the Preliminary Plan of Development (PPOD) (JBR Environmental Consultants, Inc. 2009) for a detailed description of power pole assembly, wire stringing, and construction equipment.

Up to four staging areas may be needed to store construction materials, equipment, tools, fuel, service trucks, spare parts, and vehicles. The staging areas would house portable, self-contained

toilets and possibly portable offices or serve as equipment maintenance areas. Staging areas would measure approximately 500 feet in length by 500 feet in width. No staging areas would be located on NFS land. Any hazardous materials such as fuel, lubricants, and solvents, would be handled and stored in accordance with applicable regulations, including Title 40 Code of Federal Regulations (CFR) Part 262 (40 CFR 262). Handling, storage, and clean-up of hazardous materials at staging areas would be described in a Spill Prevention, Control and Countermeasures (SPCC) Plan, which would be included as part of the Construction, Operation, and Maintenance (COM) Plan. Staging areas would include secondary containment to capture and contain any potential spills or leaks.

Poles would be set in the ground, typically without a foundation or footing, and then backfilled with native soils removed during excavation of the hole for the pole structure and/or imported backfill material (i.e., soils). Guy wires and soil anchors would be installed on three-pole dead-end/angle structures to offset changes in wire tension due to the change in the direction of the transmission line at angle poles. Concrete foundations would be used with self-supporting angle pole structures where guy wires and soil anchors could not be installed to support three-pole dead-end/angle poles, such as when there is roadway interference. Pole sites, which are the area at each proposed power pole structure that would be required for the construction equipment, excavation of the hole for the pole, and installation of the pole structure, would not exceed approximately 0.5 acre in size for single-pole and two-pole H-frame structures. Pole sites would typically not exceed 1 acre in size for three-pole dead-end/angle structures and self-supporting angle pole structures on concrete foundations. Pole sites in steeper terrain may be graded level for safe operation of equipment. Level equipment pads would not be re-graded, but reseeded so that the pad would be available for future maintenance of the pole. Materials, including the transmission poles, insulators, guy wire anchors, and all other associated hardware, would be delivered from staging areas to each of the pole sites.

After pole structures have been assembled and installed, construction crews would perform wire stringing and installation of conductors and shield wires. Wire stringing and installation activities would be performed from transmission wire setup sites. Transmission wire setup sites would measure approximately 600 feet in radius. It is anticipated that wire installation and stringing would require between 6 and 16 transmission wire setup sites. The number of sites is a function of wire-reel span lengths and engineering requirements for conductor sagging.

Existing roads would be used for construction and maintenance access as much as possible. In order to accommodate construction equipment, roads would be widened up to 30 feet, including cut and fill slopes. Roads that would be widened include designated NFS roads and two-track roads (i.e., roads shown on the Carson District Motor Vehicle Use Map [MVUM] [USFS 2011]). Certain roads that are wide enough to not require widening may need blading or installation of

erosion control measures. Road improvements would comply with: 1) *The Forest Service National Supplements to the FP-03* (USFS 2010); 2) the Forest Service Handbooks (FSH) for road construction (FSH 7709.56 and FSH 7709.57); and, 3) the Forest Plan. Several designated NFS roads have seasonal use restrictions from April 1 to November 18 that would be followed during construction. All designated NFS roads widened for construction or maintenance access would be restored to the original roadbed width and the areas that were disturbed from widening would be re-contoured and seeded.

New access roads (i.e., centerline travel road and spur roads) would be constructed to pole sites, transmission wire setup sites, and staging areas when there are no existing roads available. Access roads would be 30 feet wide and located within a 300- to 600-foot-wide corridor (variable-width corridor). The variable-width corridor would be centered on the transmission line and would measure 300 feet wide where slopes are 10 percent or less, and 600 feet wide where slopes are greater than 10 percent. Roads would be constructed primarily by mowing or masticating vegetation in a manner that leaves root systems intact to encourage re-growth and minimize soil erosion. Whole-tree removal would be necessary where new access roads cross forested areas. Rocks or other obstructions would be bladed. If rocks cannot be removed with heavy equipment, blasting may be used. While new access roads wider than 30 feet would not be expected, occasional widening beyond 30 feet may be necessary in areas where extensive blading and side cuts are required. Erosion and sediment controls would be installed as identified in the project Storm Water Pollution Prevention Plan (SWPPP), which would be included as part of the COM Plan.

Road construction across perennial streams would be avoided. Where improvements are needed to cross ephemeral and intermittent streams, the side slopes of drainages would be reduced to a slope that would allow safe vehicle travel, and the slopes and drainage bottom would be rock armored. Once construction is complete, all drainage modifications would be re-graded to restore pre-construction contours and seeded based on existing site conditions.

After construction, new access roads would be re-graded (i.e., re-contoured) and stabilized by seeding and installing erosion control features such as water bars. Where deemed appropriate by the USFS, roads near sensitive resources may not be re-graded in order to avoid inadvertent disturbance to resources. Barriers would be installed on all restored access roads located on NFS land to prevent unauthorized vehicle use. If future road access is needed for maintenance of the transmission line and depending upon the level of proposed new disturbance or the change in environmental conditions, a review of the sufficiency of the existing NEPA analysis would be made.

The approximate ground disturbance for each construction activity or area is provided in **Table 1**. Most ground disturbance would be temporary and would be restored following construction. Other disturbance would be permanent, such as the pole-structure footings at each pole site.

Table 1 Temporary Ground Disturbance Required for Project Construction

Construction Activity or Area	Approximate Construction Dimensions/Disturbance	Estimated Number
Poles structures: Single pole Two-pole H-frame Three-pole dead-end/angle	85-foot radius (+/- 0.5 acre) 85-foot radius (+/- 0.5 acre) 120-foot radius (+/- 1.0 acre)	Span distance between pole structures would typically average 800 feet, but could range from 200 to 2,000 feet depending on terrain or obstructions
Transmission wire setup sites	Approximately 600 feet radius (+/- 26 acres)	Between 6 and 16 sites, but would vary by alternative
Staging areas	500 feet long and wide (+/- 5.7 acres)	As many as 4 construction staging areas would be necessary
Widening of existing roads	30-foot-wide disturbance (consisting of a traveled way measuring up to 14 feet wide plus any curve widening, turnouts, and side cut and fill slope areas)	Varies by alternative (see Sections 1.3.2.1 through 1.3.2.4)
New access roads (i.e., spur roads, centerline travel road, and cross country travel)	30-foot-wide disturbance (consisting of a traveled way measuring up to 14 feet wide plus any curve widening, turnouts, and side cut and fill slope areas)	Varies by alternative (see Sections 1.3.2.1 through 1.3.2.4)
Tree removal from transmission line clearance area	Clearance area includes area directly beneath transmission line and areas within 21 feet to either side of each transmission line cable. Additional trees within ROW or outside of ROW that may potentially fall onto the cables or pole structures would be removed. Construction of log landings (+/- 0.5 acre) would create additional disturbance	Varies by alternative (see Specialist Report prepared for Vegetation Resources)

Source: (JBR Environmental Consultants, Inc. 2009)

Prior to construction on NFS land and BLM-administered public land, noxious weeds would be inventoried and treated within the ROW and areas within 100 feet of project ground disturbance. Treatment methods would include manual and mechanical methods and the use of the following herbicides (brand/shelf name is parentheses): Aminopyralid (Milestone); Clopyralid (Transline); Chlorsulfuron (Telar); Glyphosate (Roundup and Rodeo); Imazapic (Plateau, which is not labeled for use in California); and Triclopyr (Garlon). A five-gallon backpack sprayer would be the primary method of herbicide application, but large infestations may require a truck-mounted sprayer.

During construction, vegetation would be removed as needed at pole sites, staging areas, transmission wire setup sites, and access roads. Removal of vegetation would generally consist of mowing or masticating shrub and grass vegetation in a manner that leaves root systems intact to encourage growth and minimize soil erosion. During construction in forested areas, whole trees would be removed using heavy equipment where terrain and slope stability permits and skidded to log landings for disposal. In areas with excessive slopes and highly erodible soils, trees would be felled by crews with chainsaws and removed with helicopters. Slash would be removed or chipped and broadcast onto an adjacent area to prevent fuel loading. Prior to cutting trees on private land in California, a *Public Agency, Public and Private Utility Right of Way Exemption* would be obtained from the California Department of Forestry and Fire Protection. The exemption would waive the requirement to prepare and file a Timber Harvesting Plan.

The project must confirm with National safety and reliability standards and rules and California and Nevada regulations. The most restrictive of these standards, rules, and regulations require that obstructions be no closer than 21 feet to overhead 120 kV transmission lines. A transmission line can be expected to sag during heavy electrical loading and warm weather to within 22 feet of minimum line clearance of the ground at mid-span. To achieve the required clearance, all trees beneath the proposed transmission line and 21 feet of either side of the conductor cables would initially be removed during construction. Beyond 21 feet, any tree with the potential to fall onto the conductors or pole structures would also be removed, regardless of whether the tree is located within the proposed ROW/easement. Removal of trees from within 21 feet of the conductors, as well as trees with potential to onto the conductors or pole structures would routinely continue as needed through maintenance of the project. Tree removal during maintenance of the proposed transmission line would be performed using chainsaws, masticator, or skidding equipment. Maintenance access would be by foot-travel, pickup truck, bucket truck, or off-highway vehicle (OHV) from the nearest designated NFS or maintenance road.

Construction of the proposed project is estimated to require 8 to 12 months to complete, depending on weather or other unforeseeable events. Near sensitive receptors (i.e., occupied residences), noise-generating activities (e.g., blasting) would be limited to Monday through Friday from 7:00 a.m. to 7:00 p.m. Otherwise, work may occur 12 hours per day any day of the week. The size of the construction workforce would vary depending upon the active construction phase, but it is anticipated that it would generally include 50 to 100 people. Typical equipment and vehicles necessary for construction of the proposed project would range from standard-sized pickup trucks, to large cranes and bulldozers. Depending on site specific conditions encountered during construction, a helicopter may also be required. All construction equipment, surplus construction materials, and construction debris and wastes would be removed upon completion of the proposed construction activities and any maintenance activities.

1.2.2 Restoration of Project-Related Ground Disturbance

The terms “reclamation” and “restoration” are used interchangeably throughout this report, as are the terms “reclaim” and “restore”. A detailed plan for restoration of construction-related ground disturbance would be included as part of the COM Plan. The restoration plan would include re-vegetation success criteria based on USFS vegetation matrices and reference sites. Restoration success on NFS land would be monitored until it is deemed successful by the USFS.

1.2.3 Operation and Maintenance

The transmission line would be operated from the NV Energy Electrical Control Center in Reno, Nevada. Personnel at the Electrical Control Center would monitor voltage and power flow along the transmission line in accordance with standard operating procedures.

NV Energy would inspect the line annually to determine if maintenance is needed. Annual inspections would be from helicopter or from the ground by walking to pole structures from existing roads. An inspection that involves climbing pole structures is anticipated once every 10 years. Access to the transmission line would be from existing roads using pickup trucks, an all-terrain OHV or by walking to the pole structure. The ROW would be patrolled after unexplained outages or significant natural incidents (such as fires, earthquakes, floods, torrential rains, avalanches, or extreme electrical storms) to observe facility conditions and the surrounding environment and to begin repairing any damages. Trees that could interfere with the safe operation of the transmission line would be removed as needed (see **Section 1.2.1**).

1.2.4 Design Features Common to All Alternatives

Project design features are developed to reduce or avoid environmental effects resulting from construction, operation, and maintenance of the proposed project. Preliminary project design features came from the PPOD (JBR Environmental Consultants, Inc. 2009) submitted with the SF299 application, from the interdisciplinary team, and other plans and regulations. Design features that are specifically associated with recreation resources are listed below. The entire list of design features may be found in Chapter 2 of the pending Draft EIS (DEIS) for this project.

Recreation/Roads/Transportation (RT)

- RT 1. The use of any roads or trails will require compliance with the Carson Ranger District MVUM, including any restrictions for seasonal use.
- RT 2. All new temporary access roads and all improvements to existing roads will comply with: 1) *The Forest Service National Supplements to the FP-03* (USFS 2010); 2) the USFS Road Construction Handbooks (FSH 7709.56 and FSH 7709.57); and, 3) the Forest Plan.

- RT 3. All new access roads (i.e., spur roads and centerline travel roads) specifically constructed for this project, including those determined to be necessary for maintenance of the transmission line, will have a physical closure installed to prevent motorized access immediately following the completion of construction and restoration. The types of closure and design specification used will be approved by the USFS prior to installation.
- RT 4. Physical barriers such as boulders or natural features designed to harmonize with the natural environment of the surrounding area will be installed to prevent unauthorized vehicle use from occurring on restored roads. The use of gates or other such structures for this purpose will be avoided unless determined necessary by the USFS.
- RT 5. Maintenance activities which cause a road to be opened to unauthorized vehicles or damage to restoration improvements will need to be assessed and barriers reinstalled as needed at the expense of NV Energy.
- RT 6. Restored roads will require a signage and monitoring plan implemented by NV Energy for compliance with the closure which will include inspecting the barricade areas to determine the effectiveness of the blockades at preventing unauthorized motorized vehicle use of the restored access roads. Signs will notify the public that construction access roads are closed and are being restored. Signs will be replaced by NV Energy if vandalism occurs to the signs.
- RT 7. If unauthorized vehicle use occurs on restored roads, barricades and reclamation would be monitored for effectiveness and remedial measures taken. Monitoring will continue until disturbed areas are successfully restored.
- RT 8. Public access will be maintained with minimal delays during the construction and maintenance of the project. If there are traffic delays, NV Energy will post delay information at National Forest portals.
- RT 9. All construction vehicle movement will be restricted to the transmission line ROW/easement, pre-designated access roads, public roads, and private roads. All existing roads will be left in a condition equal to or better than their preconstruction condition.

Visual Resources (VI)

- VI 1. Non-specular conductors will be installed to reduce visual impacts.

1.3 PROPOSED ACTION AND ALTERNATIVES

The Stateline Alternative was presented as the Proposed Action in the Notice of Intent (NOI) to Prepare an EIS in the Federal Register and to the public during scoping meetings. This

alternative is no longer feasible and is now an alternative that was eliminated from detailed study for the reasons discussed in Chapter 2 of the pending DEIS.

With the elimination of the Stateline Alternative, the alternatives selected for analysis in the DEIS and in this specialist report include:

- No Action Alternative
- Mitchell Alternative
- Peavine Alternative
- Poeville Alternative
- Peavine/Poeville Alternative

Each of these alternatives is described below.

1.3.1 No Action Alternative

Under the No Action Alternative, the USFS would not issue a Special Use Permit (SUP) for a transmission line ROW across NFS land, and the BLM would not issue an amended ROW Grant for a transmission line or substation expansion on BLM-administered public land. Thus, the construction, operation, and maintenance of the proposed transmission line across NFS land and BLM-administered public land, as well as private land would not occur. The existing 120 kV system would continue to rely on the #141 and #142 transmission lines for transmitting electric load to the West Reno/Verdi area in the foreseeable future. The No Action Alternative does not provide the redundancy needed in the system and therefore would not meet the purpose and need for the project.

1.3.2 Action Alternatives

The four action alternatives analyzed within this specialist report consist of the Mitchell, Peavine, Poeville, and Peavine/Poeville Alternatives. Under implementation of any of the action alternatives, the USFS would issue a SUP for a transmission line ROW, and the BLM would issue an amended ROW Grant. For temporary roads and construction access located outside of the transmission line ROW, the USFS would issue a temporary SUP. NV Energy would purchase easements from private landowners for construction and operation of the line across private property. The ROW and easements for the proposed transmission line would be 90 feet wide for all action alternatives. The total acres of ROW and easements would vary among each of the action alternatives. **Table 2** provides a summary of the total miles of proposed transmission line and total acres of ROW/easement area that would occur on NFS land, BLM-administered public land, and private land for each action alternative.

Table 2 Summary of Action Alternatives

Action Alternative	Length of Alignment Alternative (Miles)				Area of ROW/Easement Required (Acres)			
	NFS Land	BLM-Administered Public Lands	Private Land	Total (All Land)	NFS Land	BLM-Administered Public Lands*	Private Land	Total (All Land)
Mitchell Alternative	8.4	0.4	2.9	11.7	91.6	8.1	31.6	131.3
Peavine Alternative	7.0	0.4	2.9	10.3	76.4	8.1	31.6	116.1
Poeville Alternative	3.8	0.4	13.8	18.0	44.7	8.1	147.3	200.1
Peavine/Poeville Alternative	4.3	0.4	7.1	11.8	46.9	8.1	78.5	133.5

*Includes proposed expansion area associated with the Bordertown Substation.

Implementation of any of the action alternatives would result in the construction, operation, and maintenance of the proposed project as described in **Section 1.2**. The same construction methods and procedures and design features would be used. The location of construction staging areas and wire set-up sites are placed specific to the unique conditions and configuration of a particular alignment. Construction staging areas would not be located on NFS land under any action alternative, but transmission wire setup sites may be located on NFS land. The presence and condition of existing roads available for construction access is also unique and specific to the action alternatives. Consequently, the total length of existing roads that would require improvements to use for construction access would vary among the action alternatives. The total length of new temporary access roads required for construction of the project would also vary among the action alternatives.

1.3.2.1 Mitchell Alternative

The Mitchell Alternative would be approximately 11.7 miles long. The first approximately 5.0 miles would be identical to the first approximately 5.0 miles of the Peavine Alternative and generally parallel with the California and Nevada State line, staying approximately 0.6 to 0.9 mile east of the state line. The last approximately 0.8 mile of the alignment would also be identical to the Peavine Alternative. The last approximately 0.4 mile of transmission line into the California Substation would utilize single pole structures with a distribution line under-build to accommodate the new transmission line and existing distribution line on the same poles. Approximately 4.6 miles of the Mitchell Alternative would be located adjacent to an existing power line corridor (**Figure 1**).

Approximately 11.1 miles of roads would be widened for construction access. **Table 3** presents the miles of road required to be widening and the surface disturbance associated with the widening.

Table 3 Road Widening Required for the Mitchell Alternative

Road/Route Type	Widening Required (Miles)	Surface Disturbance (Acres) ¹
Designated NFS Roads on NFS Land	5.6	14.4
Non-Designated Routes on NFS Land	1.1	2.7
Existing Roads Across Private Land	4.4	11.2
Total (Roads/Routes on All Land):	11.1	28.3

¹ Does not include existing road disturbance, which is assumed to be 9 feet wide.

The location of temporary new access roads would be determined prior to construction, but would be located within a 300- to 600-foot-wide variable-width corridor. Approximately 7.1 miles of new temporary centerline travel roads would be needed for construction of the Mitchell Alternative, resulting in approximately 25.8 acres of surface disturbance.

Design Features Specific to the Mitchell Alternative

Recreation

- RT 10. Concurrent with construction restoration, physical barriers will be installed within the ROW area where Henness Pass/Dog Valley Road will be crossed. The barriers will be installed on the east side of the road to prevent the ROW area from being utilized for motorized travel after construction in completed. Signs will be installed to notify the public that the area is closed and under restoration. The type and design of the barriers will be approved by USFS prior to installation.

Visual Resources

- VI 2. The number of new poles will be minimized by increasing the pole span length on NFS land where the area is designated as Retention for Visual Quality Objectives as terrain allows.

1.3.2.2 Peavine Alternative

The Peavine Alternative would be approximately 10.3 miles long (**Figure 1**). The first approximately 5.0 miles and the last approximately 0.8 mile of the Peavine Alternative would be identical to the Mitchell Alternative. The Peavine Alternative generally parallels the California State line, staying on the Nevada side by approximately 0.6 to 0.9 mile. The last approximately 0.4 mile of the transmission line would be constructed within an existing utility corridor on single pole structures as part of an under-build with an existing distribution line. Approximately 2.8 miles of the Peavine Alternative would be located adjacent to an existing power line corridor.

Approximately 20.8 miles of existing roads would be widened for construction access. **Table 4** presents the miles of road required to be widening and the surface disturbance associated with the widening.

Table 4 Road Widening Required for the Peavine Alternative

Road/Route Type	Widening Required (Miles)	Surface Disturbance (Acres) ¹
Designated NFS Roads on NFS Land	10.0	25.5
Non-Designated Routes on NFS Land	1.4	3.5
Existing Roads Across Private Land	9.5	24.3
Total (Roads/Routes on All Land):	20.8	53.3

¹ Does not include existing road disturbance, which is assumed to be 9 feet wide.

Approximately 7.5 miles of new temporary centerline travel roads would be needed for construction of the Peavine Alternative, resulting in approximately 27.3 acres of surface disturbance.

Design Features Specific to the Peavine Alternative

Recreation

- RT 10. Concurrent with construction restoration, physical barriers will be installed within the ROW area where Henness Pass/Dog Valley Road will be crossed. The barriers will be installed on the east side of the road to prevent the ROW area from being utilized for motorized travel after construction in completed. Signs will be installed to notify the public that the area is closed and under restoration. The type and design of the barriers will be approved by USFS prior to installation.

Visual Resources

- VI 2. The number of new poles will be minimized by increasing the pole span length on NFS land where the area is designated as Retention for Visual Quality Objectives as terrain allows.

1.3.2.3 Poeville Alternative

The Poeville Alternative would be approximately 18.0 miles long (**Figure 1**). Beginning at the Bordertown Substation, this alternative would parallel the Alturas 345 kV transmission line for approximately 6.7 miles and then follow the existing distribution power line toward the top of Peavine Peak. Construction of this section would consist of single pole structures with an under-build of the distribution line. East of Verdi, the Poeville Alternative would replace the existing, but currently inactive 60 kV #632 distribution line in its exact location, parallel with the existing #114 and #106 lines through Verdi to the California Substation. The existing #632 line H-frame

pole structures would be replaced with new H-frame pole structures. Approximately 12.6 miles of the Poeville Alternative would be located adjacent to an existing power line corridor.

Approximately 24.2 miles of existing roads would be widened for construction access. **Table 5** presents the miles of road required to be widening and the surface disturbance associated with the widening.

Table 5 Road Widening Required for the Poeville Alternative

Road/Route Type	Widening Required (Miles)	Surface Disturbance (Acres) ¹
Designated NFS Roads on NFS Land	1.8	4.5
Non-Designated Routes on NFS Land	0.9	2.4
Existing Roads Across Private Land	21.5	55.1
Total (Roads/Routes on All Land):	24.2	62.0

¹ Does not include existing road disturbance, which is assumed to be 9 feet wide.

Approximately 5.4 miles of new temporary centerline travel roads would be needed for construction of the Poeville Alternative, resulting in approximately 19.6 acres of surface disturbance.

1.3.2.4 Peavine/Poeville Alternative

The Peavine/Poeville Alternative would be approximately 11.9 miles long (**Figure 1**). The first approximately 6.4 miles of the Peavine/Poeville Alternative would be the same as the first 6.4 miles of the Peavine Alternative. The last approximately 3.8 miles would be the same as the last 3.8 miles of the Poeville Alternative. A total of approximately 4.1 miles of the Peavine/Poeville Alternative would be located next to an existing power line corridor.

Approximately 26.1 miles of existing roads would be widened for construction access. **Table 6** presents the miles of road required to be widening and the surface disturbance associated with the widening.

Table 6 Road Widening Required for the Peavine/Poeville Alternative

Road/Route Type	Widening Required (Miles)	Surface Disturbance (Acres) ¹
Designated NFS Roads on NFS Land	8.9	22.6
Non-Designated Routes on NFS Land	0.0	0.0
Existing Roads Across Private Land	17.2	43.7
Total (Roads/Routes on All Land):	26.1	66.3

¹ Does not include existing road disturbance, which is assumed to be 9 feet wide.

Approximately 7.8 miles of new temporary centerline travel roads would be needed for construction of the Peavine/Poeville Alternative, resulting in approximately 28.4 acres of surface disturbance.

Design Features Specific to the Peavine Alternative

Visual Resources

- VI 2. The number of new poles will be minimized by increasing the pole span length on NFS land where the area is designated as Retention for Visual Quality Objectives as terrain allows.

1.4 RECREATION RESOURCES ISSUE STATEMENT

Presence of a transmission line as well as construction activities may impact existing and future recreation uses in the project area and forest character values.

Presence of a transmission line and/or construction activities, including ground disturbance, vegetation management, sights and sounds of construction activities, and access issues may impact dispersed recreation. The presence and ongoing operation and maintenance of the transmission line may impact local visual resources as they pertain to the desired recreation setting and experience. Construction activities and the presence of roads and a transmission line may diminish the natural setting and feeling that recreational users associate with the pine forests in the Dog Valley/Stateline area. Increased vehicle access on temporary and permanent project access roads following construction may impact other resource values and uses.

2.0 AFFECTED ENVIRONMENT

2.1 AREA OF ANALYSIS

The area of analysis, or study area, for recreation resources includes all areas within two miles of the centerline of each transmission line alignment alternative, and all areas within two miles of the California and Bordertown substations (**Figure 1**). This area was selected as the study area because the Proposed Action or other Action Alternatives would be unlikely to have any measureable incremental effects on recreation resources outside of the boundaries of this area.

There are approximately 63,488 acres of land within the boundaries of the study area. Approximately 28,730 acres consist of NFS land that is administered by the USFS, Carson Ranger District. Approximately 1,445 acres are public lands administered by the BLM Eagle Lake Field Office. Private land accounts for approximately 31,211 acres of the study area. The other approximately 2,102 acres of land within the study area is owned or administered by the United States Department of Defense, the Bureau of Reclamation, and the California Department of Fish and Wildlife.

2.2 DATA AND INFORMATION SOURCES

The major sources of data and information used to characterize and describe the existing conditions and management direction of recreation resources in the study area include the:

- *Toiyabe National Forest Land and Resource Management Plan* (Forest Plan) (USFS 1986);
- Humboldt-Toiyabe National Forest Geographic Information Systems Corporate Data;
- *Specialist Report for Recreation: Dog Valley Route Adjustment Project* (Morris 2011);
- *ROS Users Guide* (USFS 1982); and
- *Proposed Resource Management Plan and Final Environmental Impact Statement: Eagle Lake Field Office* (BLM 2007).

Secondary sources of data and information were also used. All sources are cited and listed in **Section 6.0** of this report, as appropriate.

2.3 REGULATORY FRAMEWORK

2.3.1 Humboldt-Toiyabe National Forest

There are approximately 29,607 acres of NFS land within the boundaries of the study area. The NFS land within the study area is part of the Humboldt-Toiyabe National Forest and is managed by the USFS, Carson Ranger District in accordance with all applicable federal laws and regulations. Management is also in accordance with the Forest Plan (USFS 1986).

The Forest Plan provides management direction for the entire Toiyabe National Forest and specific direction for the various management areas that the Toiyabe National Forest has been divided into.

2.3.1.1 Forest-Wide Management

The Forest Plan (USFS 1986) defines forest management goals as concise statements describing the desired condition to be achieved sometime in the future. These goals are applicable to the entire Toiyabe National Forest. The following forest management goals are listed in the Forest Plan for recreation resources:

- The Toiyabe National Forest will increase the quality and quantity of developed and dispersed recreation opportunities with particular emphasis in the Sierra Nevada and the Spring Mountains of southern Nevada; and
- Recreation management will be in concert and coordination with appropriate city, county, state, and other federal agencies.

The management requirements necessary for achieving forest-wide goals and objectives are referred to interchangeably as "standards" and "guidelines" in the Forest Plan (USFS 1986). The standards listed in the Forest Plan for recreation resources are provided in **Table 7**. The table also provides the standards listed for several other resources that are related to recreation resources and applicable to the proposed project.

Table 7 Forest-Wide Standards

Standard	Resource	Forest Plan Page
Manage the forest to provide a wide variety of opportunities within the Recreation Opportunity Spectrum.	Recreation	IV-13
Roads, trails, and "areas" will be designated in the Ranger District travel plans and maps for motorized vehicle use.	Recreation	IV-14
Protect the scenic quality of the forest by achieving the designated visual quality objectives, unless modified by a site-specific environmental assessment.	Recreation	IV-14
Require "pack-out" of refuse from all dispersed recreation areas.	Recreation	IV-14
Roads constructed for site-specific resource activities will be: 1) developed to a standard which minimizes resource impact; and 2) scheduled for reclamation unless specifically identified as long-term access needed for management of the Toiyabe National Forest.	Transportation System and Facilities	IV-55

Most of the other standards and guidelines listed in the Forest Plan provide direction that is more specific to the management of developed recreation sites and trails.

2.3.1.2 Management-Area Direction

The Forest Plan (USFS 1986) divides the Toiyabe National Forest into management areas and provides specific standards for each area. The study area is located mostly within the Dog Valley Management Area (Management Area #1). The following standards and direction for recreation resources are listed in the Forest Plan for the Dog Valley Management Area:

- Key resources to emphasize in Dog Valley are the protection of soil, water, and wildlife values, particularly mule deer winter range and day-use and dispersed recreation opportunities.
- Recreation will be managed primarily for roaded natural recreation opportunities. Informal campsites and hunter camps will be managed as important components of dispersed recreation.

2.3.1.3 Recreation Opportunity Spectrum

The method employed by the USFS for the management of recreation resources is the Recreation Opportunity Spectrum (ROS). Specifically, the ROS is used to classify the types of recreation opportunities available within particular areas of the National Forest, or to specify the management objectives to achieve recreation opportunities desired within particular areas (USFS 1982).

According to the *ROS Users Guide* (USFS 1982), a recreation opportunity can be expressed in terms of three principle components: 1) activities; 2) setting; and 3) experience. Setting is described as the physical, biological, and social conditions, and the conditions provided by management actions that collectively give a place value. Experience is the practical knowledge, skill, practice, or feeling derived from the direct observation of or participation in particular activities. Activities are the various actions and endeavors recreation users engage in to realize a desired experience or set of experiences, such as back country skiing or mountain biking. Recreation activities in given settings provide opportunities for the recreationist to attain desired experiences.

The ROS is divided into six classes. Each class is defined in terms of its possible mixes and combinations of activities, setting, and experience components that distinguish the types of recreation opportunities it provides. The six classes that the ROS is divided into include: Primitive; Semi-Primitive Non-Motorized; Semi-Primitive Motorized; Roaded Natural; Rural; and Urban.

The Forest Plan (USFS 1986) indicates that the Dog Valley Management Area should be managed primarily for Roaded Natural recreation opportunities. Based on the definitions of a

recreation opportunity and the ROS described above, the Roded Natural ROS class would best correspond with the recreation management goals of the Dog Valley Management Area.

The activities, setting, and experiences that typically characterize the Roded Natural class of the ROS are described in the *ROS Users Guide* (USFS 1982). Some of the activities listed in the *ROS Users Guide* for the Roded Natural ROS class include: viewing scenery, motorized vehicle travel, hiking, horseback riding, mountain biking, camping, hunting, fishing, picnicking, mountain climbing, swimming, canoeing, sledding, and cross-country skiing. The setting of the Roded Natural class is characterized by predominantly natural appearing environments with moderate evidence of humans in the form of sights and sounds. However, such evidences usually harmonize with the natural environment. Interaction between recreation users may be low to moderate, but evidence of other users may be prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for construction standards and design of facilities.

According to the *ROS Users Guide* (USFS 1982), there is about an equal probability to experience affiliation with other user groups as there is for isolation from sights and sound of humans in areas classified as Roded Natural. Opportunity to have a high degree of interaction with the natural environment is provided in the Roded Natural class of the ROS. Challenge and risk opportunities associated with more primitive type of recreation are typically not very important within the Roded Natural class of the ROS. However, the opportunity to practice and test outdoor skills might be of importance. Opportunities for both motorized and non-motorized forms of recreation are available to users within the Roded Natural ROS class.

2.3.2 Public Lands Administered by the BLM

2.3.2.1 Eagle Lake Field Office Proposed Resource Management Plan

There are approximately 1,445 acres of public lands within the study area that are administered by the BLM Eagle Lake Field Office in accordance with the *Eagle Lake Field Office Proposed Resource Management Plan and Final EIS* (PRMP) (BLM 2007). BLM-administered public lands are managed for multiple uses, including recreation, mining, mineral materials, transportation network, utility corridors, and wildlife habitat.

The PRMP (BLM 2007) provides management goals and objectives for the resources and uses that public lands administered by the BLM Eagle Lake Field Office are managed for. The following management goals and objectives are provided for recreation resources:

Recreation Goals

- Provide and enhance developed and undeveloped public recreational opportunities. Ensure that quality customer service is provided, resources are protected, and user conflicts are minimized.

Recreation Objectives

- Focus management attention on Special Recreation Management Areas. Greater management attention and investment in facilities is warranted in these areas due to high visitor use, resource-protection issues, user conflicts, and health and safety concerns.
- Land not falling within Special Recreation Management Areas should be managed for dispersed, self-sufficient recreation as part of the Extensive Resource Management Area. Facilities should be minimal and developed only to facilitate management objectives for land health and customer service.
- Solicit donations and encourage volunteer projects and programs in an effort to increase revenue, promote effective resource management, and improve customer service.
- Provide for a full range of recreational experiences emphasizing self-sufficient exploration and recreation based on the recreation opportunity spectrum, including:
 - Primitive, non-motorized recreational experiences with minimal or no facilities and management presence.
 - Vehicle-based recreational experiences with directional signing and visitor information.
 - Camping and day-use experiences with visitor facilities and services appropriate for the level of use and degree of site development.
 - Provide legal public access to and through BLM-administered lands with recreational value. Encourage, or where appropriate require use of existing roads and trails.
 - Encourage high-quality recreational travel on roads and trails that connect population centers with activity areas. Most should be return routes (i.e., circular or “looped” routes) and would include directional signing, as well as visitor and interpretive information where appropriate.
 - Interpretive information should deal with public land resources and BLM management programs. Information should enhance visitor awareness, understanding, and appreciation of public land resources.

2.3.2.2 Recreation Opportunity Spectrum

BLM-administered public lands within the study area are managed for backcountry ROS recreational opportunities. The backcountry ROS class was created by combining the Semi-Primitive Non-Motorized and the Semi-Primitive Motorized ROS classes. According to the PRMP, the two semi-primitive classes differ little when a designated route system is established since all vehicle travel would be limited to designated roads and trails under both classes.

2.4 EXISTING CONDITIONS

2.4.1 Recreation Setting

Recreation setting can be defined as the physical, social, and managerial characteristics that, when combined, give a place value (Clark & Stankey 1979). Physical characteristics include the natural features of a place, such as water bodies, forest and vegetation, mountain vistas, or scenery (Clark & Stankey 1979). The physical characteristics of a place also include the human modifications to a place, such as cabins, roads, or other features that have been constructed. Social characteristics may include the average level of use and the types of use that a place receives. Management characteristics include access roads, trailheads, picnic tables, or other facilities developed or managed by the land owner or manager (Clark & Stankey 1979).

The recreation setting within the study area is best correlated with the recreation setting of the Roaded Natural ROS class. *The ROS Users Guide* (USFS 1982) describes the setting of the Roaded Natural ROS class as being:

"...characterized by predominantly natural appearing environments with moderate evidence of the sights and sounds of man. Such evidences usually harmonize with the natural environment. Interaction between users may be low to moderate, but with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is provided for in construction standards and design of facilities."

The physical, social, and managerial characteristics that give value to the recreation setting within the study area and contribute to its existence as a Roaded Natural ROS class setting are described in detail below.

2.4.1.1 Physical Characteristics

Vegetation Cover

The vegetation cover within the study area varies, but can generally be described as either forestlands or shrublands. Wildfires have affected the vegetation cover in areas. The effects that wildfire has had on the recreation setting within the study area is discussed later in this section.

The forestlands within the study area are characterized by intermediate- to mature-aged coniferous forest that is dominated primarily by Jeffrey pine (*Pinus jeffreyi*). Dominant understory species include Antelope bitterbrush (*Purshia tridentata*) and manzanita (*Arctostaphylos* sp.).

Forestlands occur throughout the study area, but are concentrated largely in the far western portion of the study area, generally west and north of Summit One. Large contiguous areas of

forestlands also occur in Mitchell Creek Canyon and the canyon-like area that Dog Creek flows through north of Verdi, Nevada. Another fairly large area of contiguous forestlands occurs east of the California State line, approximately two miles west of the summit of Peavine Peak. The approximate acres of forestlands that occur within the ROW/easement area for each Action Alternative are summarized in **Table 8**.

Shrublands within the study area are characterized by open vegetation cover that is comprised mostly of mixed xeric shrub species. There are a multitude of shrub species that occur within the shrubland areas; sagebrush (*Artemisia* sp.), rubber rabbitbrush (*Ericameria nauseosa*), and antelope bitterbrush (*Purshia tridentata*) are among the most commonly occurring species. Tree cover is generally absent within shrubland, but there are several small stands of aspen (*Populus tremuloides*) and isolated Jeffrey pine trees in places.

The vegetation cover within most of the portion of the study area located east of the California State line is best described as shrubland. Nearly the entire north-, south-, and east-facing slopes of Peavine Peak consist of shrubland, as do areas on the basin floors beyond these slopes. Shrubland also commonly occurs within portions of the study area located west of the California state line. The natural environment of almost the entire area within two miles of the Bordertown Substation is shrubland. Shrubland continues further south of the substation, surrounding areas of forestlands through southern Long Valley and areas north of Mitchell Canyon. Shrublands also best describes the vegetation cover of the area west of the California Substation and south of Summit One, and areas west of Verdi, Nevada. The approximate acres of shrublands that occur within the ROW area for each Action Alternative are summarized in **Table 8**.

Table 8 Action Alternatives-Forestlands and Shrublands Component by Alternative

Description	Action Alternative					
	Stateline	Mitchell	Peavine	Poeville	Stateline/ Poeville	Peavine/ Poeville
Acres of forestlands within ROW	23.8	28.2	20.6	3.4	10.7	12.3
Acres of shrublands within ROW	85.3	89.6	91.8	193	121.3	117.5

Note: Acres are approximate and have been rounded to the nearest tenth of an acre/mile.

There are also some areas within the study area that have been developed with roads, commercial and residential structures, and other related infrastructure. Some areas are also used for agriculture in Long Valley. Vegetation cover within these areas has either been removed or manipulated, and is not discussed further because these areas provide no known recreational value or opportunity.

Human Modification

Human modification within the study area is moderately evident in most places, and most commonly occurs in the form of unpaved roads and trails. Most places within the study area are rarely farther than 0.5 miles from the nearest road or trail, and roads or trails provide access to most places within the study area. Road signs and markers and road pullouts and parking areas are also evident in association with roads and trails. Other forms of human modification evident from places within the study area include overhead utility lines and poles, trailheads, communications towers, residential and agricultural structures, and gravel mining activities. Human modifications evident on BLM-administered public lands within the study area include the existing Bordertown Substation and overhead utility lines, such as the Alturas 345 kV transmission line.

The degree of human modification is generally equal in forestlands and shrublands within the study area. However, the low height of the dominant vegetation cover within shrubland areas allows users greater sight distances and visibility than within forestlands where taller trees are found. Increased sight distance and visibility in shrubland areas may enable users to see more human modifications from a single location than they would see from a single location within forestlands. Seeing more human modifications from a single location may lead to the perception that the level of human modification to the landscape is greater than the level within the woodlands, despite the level being roughly equal.

Wildfire and Setting

Several wildfires in the study area have burned areas where forestlands and shrublands currently exist. The largest contiguous areas that have burned in wildfires are limited to three locations within the study area: 1) the south-facing slope of Peavine Peak; 2) the area west of the California Substation and south of Summit One; and, 3) the area south of the Bordertown Substation and north of Mitchell Canyon (**Figure 2**). The greatest effect that wildfire has had on the setting is alteration of vegetation cover.

The shrublands area located west of the California Substation and south of Summit One is the result of a wildfire that occurred in 1994 (**Figure 2**). The recreation setting of this area would have been considered a woodland setting prior to the fire, and there are some individual trees and isolated stands of trees that survived the wildfire.

The vegetation cover that characterizes the shrublands area located on the south-facing slope of Peavine Peak is the result of a series of wildfires that occurred between the years of 1996 and 2006 (**Figure 2**). Most of the present vegetation cover in this area is dominated by cheatgrass (*Bromus tectorum*), an invasive species prone to colonizing areas burned by wildfire (Colorado State University Extension 2012). Prior to the wildfires, cheatgrass would likely not have

occurred, or would have been less likely to be a dominant species if it did occur. The dominant species would have been comprised of various native shrubs, and some areas may have also contained individual or sparse groupings of Jeffrey pine trees.

The area south of the Bordertown Substation was burned by a wildfire that occurred during 1984 (**Figure 2**). The recreation setting within most of this area is considered shrubland, but there are some small, isolated areas where forestlands also occur. These areas are associated with stands of Jeffrey pine that survived the wildfire. It is likely that forestlands would have been more prevalent in this area prior to the wildfire, and thus shrublands would have been less prevalent. Since 1984, ecological succession has resulted in growth of new trees in isolated areas. These trees are still quite young and relatively small compared to existing trees in other areas of forestlands. Additionally, pine saplings have also been planted at select locations within the area that was burned.

The areas that have burned by wildfire since 1980 that would be contained within the ROW area for each Action Alternative are summarized in **Table 9**.

Table 9 Action Alternatives – Wildfire-Affected Area by Alternative

Description	Action Alternative					
	Stateline	Mitchell	Peavine	Poeville	Stateline/ Poeville	Peavine/ Poeville
Acres affected by wildfires within ROW	70.0	76.8	68.3	89.1	88.5	86.8

Note: Acres are approximate and have been rounded to the nearest tenth of an acre/mile.

2.4.1.2 Social Characteristics

Recreational use of the study area is frequent given its proximity to the city of Reno, but users are generally dispersed and not concentrated. Users are able to isolate themselves from other users just as easily as they are able to interact or participate with other users. The area provides opportunities to interact with the natural environment (e.g., forestlands, shrublands, mountain peaks, etc.), but evidence of human activity and modifications is moderate and frequently encountered. Unpaved roads and trails are the most commonly encountered evidence of human modification in the study area. As stated, most areas that are managed for or have potential for recreational use within the study area are rarely farther than 0.5 miles from the nearest road or trail.

Forestlands generally provide the best opportunity for users to isolate themselves from other users and somewhat escape the sight and sounds of humans. Vegetation cover in shrubland areas do not buffer the sight and sounds of other users as well as the tree cover found in forestlands.

2.4.1.3 Managerial Characteristics

Developed recreation sites located within the study area are limited to several decommissioned camping areas where camping is still allowed but facilities are not available. There are several trailheads also located within the Dog Valley-Peavine Area, including the Red Metal Trailhead, Stead Trailhead, and the Horizon Hills Trailhead. There are no developed recreation sites located specifically within the boundaries of the ROW for any of the Action Alternatives.

With the exception of the developed recreation sites described above, recreation opportunities provided within the study area are dispersed, and motorized and non-motorized. There are many roads and trails open for motorized and non-motorized travel that provide users with access for a variety of recreation opportunities, including driving for scenic or pleasure purposes, OHV recreation, hiking, bicycling, horse-back riding, and camping. Henness Pass Road is the primary route used for access to the NFS land in the study area, and the road bisects the Verdi region. A visitors parking area with informational signs about the National Forest is located along the shoulder of Henness Pass Road in Verdi. The parking area is often referred to as the Dog Valley Trailhead. The location of Henness Pass Road and the Dog Valley Trailhead, as well as the Red Metal, Stead, and Horizon Hills trailheads are shown on **Figure 3**.

Other trails on NFS land in the study area are not designated as legal routes for motorized travel, but do provide additional opportunities for mechanized and non-motorized use. Some private land within the study area also contains trails, such as an interpretative trail on private land next to the Verdi Public Library (**Figure 3**). While this particular trail is located on private land, it is open for public use. Relatively short segments of numerous trails and roads that provide access for dispersed recreation opportunities within the study area occur within the boundaries of the proposed ROW for each Action Alternative.

2.4.2 Recreation Activities

Recreationists engage in a variety of recreation activities within the study area. In general, most activities within the study area are dispersed motorized and non-motorized uses associated with the many unpaved roads and trails in the area. Driving for scenic or pleasure purposes, OHV recreation, hiking, and mountain biking are among the most common of these activities. Some of the possible activities that the *ROS Users Guide* (USFS 1982) lists for the Roaded Natural ROS class are also applicable to the Study Area. These activities include: scenic photography, wildlife viewing, horseback riding, camping, hunting, fishing, sledding, and cross-country skiing.

The Truckee River flows through the southern portion of the study area and is a destination for many recreationists. Activities include fishing, swimming, kayaking, and floating on rafts.

2.4.3 Recreation Experiences

Recreation experience is the response or feeling that a user has from observing or participating in a recreation activity within a particular recreation setting (Haas et al. 2011). Recreationists participate in preferred activities within preferred settings in order to realize a desired experience or set of experiences (USFS 1982). The recreation setting of the study area and the activities that users engage in within the setting create the recreation experiences that would be expected for the Roded Natural ROS class.

Opportunities for both motorized and non-motorized forms of recreation are available. The availability of these forms of recreation allow for user experiences ranging from more primitive in nature to suburban and developed. Some of the most common experiences that recreation users seek within the study area include the following:

- Experience the sights, sounds, and smells of nature;
- Experience wildlife in natural habitat;
- Experience appreciation and enjoyment of forest character (i.e., woodland setting);
- Experience enjoyment and pleasure from being outdoors;
- Experience a brief escape from the everyday demands of life;
- Experience refreshment and reduced stress;
- Experience peacefulness and relaxation;
- Experience a change of pace from "city life"; and
- Experience physical exercise outside of gyms or indoors.

Challenge and risk opportunities associated with remote settings, self-reliance, or survival are generally not important to most users that visit the study area. The sense of adventure from exploration of pristine areas is generally not an important experience to most users either.

3.0 EFFECTS ANALYSIS

3.1 ANALYSIS METHODOLOGY

The analysis of direct and indirect effects first involved the establishment of existing baseline conditions for the recreation resources within the study area, as presented above in **Section 2.4**. Existing baseline conditions were evaluated based on their potential to be affected by activities associated with the implementation of each alternative. Effects were also derived by determining whether the change in existing and expected conditions is compliant with the existing management direction for recreation resources, or whether the resulting conditions would conflict with management direction.

The following indicators were used to determine if an alternative would have a potential effect on the recreation resources within the study area:

- Directly or indirectly preclude or contribute to the disruption, degradation, or loss of dispersed recreation opportunities;
- Conflict with the Roaded Natural ROS Class; or,
- Conflict with the recreation management direction and standards of the Forest Plan (USFS 1986) and the BLM PRMP and ROD (BLM 2007 & 2008).

3.1.1 Effect Intensity and Context

In accordance with NEPA requirements, an effect should be discussed in terms of context and in terms of intensity. In this Specialist Report, context refers to the location, type, or size of the area to be affected relative to each resource component. Intensity refers to the severity or level of magnitude of an alternative's impact. The intensity of effects in this Specialist Report is defined as either "Major", "Moderate", "Minor", or "Negligible". In addition, the duration of effects can be "Temporary", "Short-term", or "Long-term". These terms are described more specifically in **Table 10**.

Table 10 Definition of Effect Intensity and Duration

Attribute of Effect		Description Relative to Recreation Resources
Magnitude	Negligible	Alternative would not cause detectable changes in existing conditions and would not have any measureable effects on recreation opportunities
	Minor	Alternative would result in detectable changes in existing conditions, but the changes would be slight and generally affect only a limited number or types of recreation opportunities
	Moderate	Alternative would result in clearly detectable changes in existing conditions and/or would affect a broad range of recreation opportunities

Attribute of Effect		Description Relative to Recreation Resources
	Major	Alternative would result in a large, easily measureable change in existing conditions that is severely adverse or exceptionally beneficial and/or would affect nearly every type of recreation opportunity or recreation opportunities across a large, expansive area
Duration	Temporary	Occurring during construction and maintenance activities
	Short-term	10 years or less
	Long-term	More than 10 years

3.2 DIRECT AND INDIRECT EFFECTS BY ALTERNATIVE

3.2.1 No Action Alternative

Construction activities and operation and maintenance activities would not occur under implementation of the No Action Alternative. The existing settings, activities, and experiences that define and characterize the dispersed recreation opportunities within the study area would not be affected. Implementation of the No Action Alternative would not have direct or indirect impacts on any of the effects indicators. Accordingly, implementation of the No Action Alternative would not be expected to have any impacts on recreation resources. The No Action Alternative would not conflict with the Road Natural ROS Class, or the recreation management direction and standards of the Forest Plan (USFS 1986) and the BLM PRMP and ROD (BLM 2007 & 2008).

3.2.2 Mitchell Alternative

3.2.2.1 Disruption, Degradation, or Loss of Dispersed Recreation Opportunities

Construction Activities

Construction of the proposed project would be expected to create temporary traffic delays on designated NFS roads and motorized trails that are used for construction access. Temporary traffic delays would result from the construction of road widening improvements required in order for designated NFS roads and motorized trails to safely accommodate construction equipment. The designated NFS roads and motorized trails that would be used for construction access and require widening improvements are presented in **Table 11**. Restoration of the widening improvements once construction of the proposed project is complete would be expected to result in traffic delays similar to those during construction of the improvements.

Table 11 Mitchell Alternative: Designated NFS Road Widening

Route ID	Estimated Miles of Road/Trail Requiring Improvements on NFS Land	Estimated Miles of Road/Trail Requiring Improvements on Private Land
21514	0.36±	0
31002A	0.37±	0
31002B	0.14±	0
41419	2.25±	0.1±

Route ID	Estimated Miles of Road/Trail Requiring Improvements on NFS Land	Estimated Miles of Road/Trail Requiring Improvements on Private Land
41643	0.82±	0
41668	0.91±	0
41735	0.79±	0
TOTAL	5.64±	0.1±

Temporary traffic delays would also result from encountering construction equipment travelling at relatively low speeds on designated NFS roads and motorized trails, regardless of whether the road or trail requires widening improvements. Dog Valley/Henness Pass Road would be used for access during construction of the 2.3-mile section of the transmission line that would be located next to the road, as well as other sections along the approximately southern half of the Mitchell Alternative. Dog Valley/Henness Pass Road is a primary access route for recreationists visiting the NFS land within the study area and surrounding vicinity. Temporary traffic delays on Dog Valley/Henness Pass Road would likely affect more recreationists than they would on other roads and motorized trails in the study area due to the existing traffic volume of this road. However, delay time on Dog Valley/Henness Pass Road would be negligible because the existing width of the travelled way is wide enough to accommodate construction equipment without any additional widening improvements while also providing adequate space for recreationists to frequently and safely pass construction equipment.

Temporary traffic delays would essentially reduce the time that would normally been available to recreationists for engaging in activities. The reduction is not anticipated to be more than several minutes because existing roads and trails are either wide enough to allow frequent passing, or widening improvements would include pullout areas which would make passing possible. The impact of traffic delays would be negligible due to the short delay periods, the limited miles of designated NFS roads and motorized trails that would require widening, and the limited number of these roads that may used for access at any given time during construction. With impacts negligible, it is anticipated that very few recreationists would avoid use of the NFS land within the study area as a consequence of traffic delays. A detailed and comprehensive description of the potential effects that the Mitchell Alternative would have on the transportation network is provided in the *Specialist Report for Roads and Transportation Resources* (USFS 2013a).

There would be specific effects to motorized recreation from the widening of approximately 0.36 mile of USFS Trail 21514 for project construction access. Widening this section of the motorized trail would change the trail-like experiences to experiences associated more closely with motorized travel on roads. Effects would be temporary because the trail would only be widened during project construction. The original width and conditions of USFS Trail 21514 would be restored following construction. Effects would be minor because of the temporary duration and because of the relatively short length of motorized trail that would be widened.

Despite the negligible effects anticipated to result from temporary traffic delays during project construction, some OHV recreationists may choose to use non-designated routes or create new, unauthorized roads or trails on NFS land in reaction to the traffic delays. The creation of new unauthorized roads or trails on NFS land is illegal and prohibited per 36 CFR 261.13. Motorized travel on existing unauthorized or non-designated roads and trails on NFS land is also prohibited per 36 CFR 261.13. Violators of 36 CFR 261.13 are subject to a fine of up to \$5,000, imprisonment for up to 6 months, or both. There are numerous existing designated NFS roads and motorized trails within reasonably close proximity to the study area that would not be used for access during construction of the Mitchell Alternative. It is anticipated that most OHV recreationists affected by increased traffic congestion or delays would use other designated NFS roads and trails instead creating or using unauthorized roads and trails and facing potential penalties for violations of 36 CFR 261.13. Most OHV recreationists would also be unlikely to create new unauthorized roads or trails on NFS land because construction of the proposed project and increased traffic congestion or delays associated with it would be temporary.

Any unauthorized use of non-designated roads and trails for motorized recreation would have adverse effects on non-motorized recreation opportunities. Motor vehicles, particularly OHVs, produce mechanical noises that are relatively louder than natural sounds, such as bird songs, leaves rustling, and so forth. Thus, the unauthorized use of motor vehicles in areas where such use currently does not occur would affect recreation experiences related to natural sounds, peacefulness, and solitude. The presence of motor vehicles and the wear of the road or trail surface from continued motorized travel in these areas may cause them to be perceived as less remote to non-motorized recreationists. The non-motorized recreation opportunities most likely to be adversely impacted include activities most directly associated with the experiences that unauthorized motorized recreation would affect. These activities include wildlife viewing, hunting, scenic photography, and other non-motorized activities typically participated in alone.

Unauthorized motorized use of temporary access roads created for construction of the proposed project would also adversely impact non-motorized recreation opportunities. Restoration and blockading of temporary new access roads would be anticipated to prevent unauthorized motorized travel on these roads after construction is completed. Smaller sized OHVs, such as ATVs or motorcycles may be able to maneuver around blockades and travel on restored access roads. Recreationists that participate in non-motorized activities in settings specifically intended to avoid motorized sounds and sights would be most impacted and most likely to be displaced from areas crossed by temporary access roads that are used for unauthorized travel. There are many areas of NFS land within reasonable distance of the study area that would not be crossed by temporary new access roads. Equivalent opportunities for non-motorized activities in natural settings where motorized travel or recreation does not occur are available in these areas. Non-

motorized recreationists displaced from the study area due to the impacts of unauthorized motorized use would be expected to use these nearby areas of NFS land. The impact on non-motorized dispersed recreation opportunities would be moderate because unauthorized motorized travel would diminish recreation experiences unique to non-motorized activities and settings. The impact would be short-term because the unauthorized use of temporary access roads after construction and restoration would result in USFS OHV rangers monitoring these roads per a cost recovery agreement with NV Energy (see **Section 1.2.4**). After monitoring is initiated, unauthorized use would be expected to stop soon thereafter due to the possible penalties of fines and imprisonment resulting from violation of 36 CFR 261.13.

Dispersed recreation within the study area may also be degraded temporarily by construction noise and visual impacts associated with operation of construction equipment. Construction noise would generally impact recreation opportunities on the NFS land and BLM-administered public lands within close proximity to construction access roads and the transmission line ROW. Visual impacts would also affect these areas because these areas are where equipment would be routinely operated during construction of the Mitchell Alternative. Noise and visual effects on dispersed recreation that are related to construction of the proposed project would be temporary, lasting only as long as required to complete construction activities in a given location. Temporary effects related to the visual presence of construction equipment and increased noise during construction would be anticipated to primarily affect non-motorized activities. Effects on non-motorized recreation opportunities would be minor because there are other areas of NFS land within a reasonable distance that would not be affected by the sounds and sights of project construction. Effects would also be minor because the existing setting throughout much of the study area includes sights and sounds of motorized vehicles from intermittent use of existing designated NFS roads and motorized trails. Effects on motorized recreation opportunities would be negligible because experiences of solitude and isolation from sights and sounds of humans in natural settings are typically less important to motorized activities. A detailed and comprehensive description of the potential effects that the Mitchell Alternative would have on visual resources is provided in the *Specialist Report for Visual Resources* (USFS 2013b).

Operation and Maintenance Activities

Operation and maintenance of the Mitchell Alternative would cause evidence of humans to increase in the study area. Increased evidence of humans would be due to visibility of the proposed pole structures and overhead conductors, removal of forestland portions of the ROW/easement area, and corona noise. Increases in the evidence of humans would have effects on the recreation opportunities within the study area by causing changes to recreation settings and experiences.

Approximately 2.2 miles of the Mitchell Alternative that would cross NFS land would be located next to the existing #102 transmission line. An additional approximately 0.1 mile section that would cross NFS land would replace an existing overhead distribution line as an under-build, or an overhead distribution line. Both of these sections of the Mitchell Alternative would also be located next to Dog Valley/Heness Pass Road, which is regularly travelled and a primary access route to NFS land within the study area. The evidence of humans in this area is relatively high due to visibility of the existing transmission line and the sight and sound of vehicles travelling on Dog Valley/Heness Pass Road. Increases in the evidence of humans from the addition of the Mitchell Alternative would have negligible impacts on recreation resources along these approximately 2.3 miles because the existing recreation setting is characterized by evidence of humans. Changes to the recreation setting on BLM-administered public lands would also have negligible impacts because the proposed transmission line would be located next to the existing Alturas 345kV transmission line on BLM-administered public lands.

Other sections of the Mitchell Alternative that would cross NFS land would not be located next to existing power lines. However, nearly all sections of the Mitchell Alternative that would cross NFS land are within 0.5 mile or closer of one or more existing NFS roads or trails. Although these roads and trails are typically travelled less often than Dog Valley/Heness Pass Road, the sights and sounds of motor vehicles travelling on these roads does contribute evidence of humans to the setting intermittently. Visibility of the proposed pole structures would be a different type of evidence of humans than vehicles passing on nearby roads and trails and would be constantly present.

Corona noise would also increase the evidence of humans along these sections of the proposed transmission line. Due to the arid climate of the study area, corona noise would typically not affect the recreation setting in areas outside of the proposed transmission line ROW/easement area. Within the ROW/easement area, corona noise would reduce the area available for recreation opportunities associated with experiences of the sounds of nature. Corona noise would degrade recreation activities often associated with experiences of natural sounds, such as cross-country skiing or hunting.

Within existing forestland recreation settings, the impact on recreation resources from visibility of the proposed transmission line and corona noise would be moderate and long term. Approximately 28.2 acres of forestland occur within the ROW/easement area for the Mitchell Alternative. Approximately 26.5 acres of the forestland within the ROW/easement area occur on NFS land. The other approximately 1.7 acres occur on private land. Other sections of the proposed transmission line that would cross NFS land in settings other than forestland would have a long-term minor impact, except for the sections that would be next to the existing #102 transmission line and replace the existing distribution line with an under-build. As described,

impacts along these sections, and the section of transmission line that would cross BLM-administered public lands, would be long term and negligible.

The intensity of the effects on recreation setting would be greater in forestland areas because not only would the corona noise and presence of the proposed pole structures and overhead conductors increase the evidence of humans, but the setting would change entirely from forestland to shrubland. Recreation activities that are strongly correlated with forestland setting, such as wildlife viewing, scenic photography, hunting, or cross-country skiing, would be degraded within the ROW/easement area. Recreation experiences related to the enjoyment of forest character would become unavailable within the ROW/easement area. Removal of the forestland cover from the ROW/easement area would also create a cleared corridor through the surrounding forestland in the study area on either side of the ROW/easement area. Visibility of the cleared corridor would impact activities strongly associated with natural settings with little human modifications, particularly scenic photography and viewing wildlife in natural habitat.

Most recreation opportunities within the study area are associated with motorized use of the existing roads and trails in the area. The intensity of the impacts may be less on motorized activities because recreation settings that are highly natural with little to no evidence of humans is typically less important to motorized recreationists. Surrounding oneself with the sights and sounds of nature is typically not an experience that is desired from motorized recreation. Because most recreation opportunities within the study area are associated with use of the existing roads and trails, and impacts would be expected to be less intense on motorized recreation, the number of recreationists that would be displaced from the ROW/easement area would be minimal. There is NFS land within a reasonable distance that provides recreation settings and experiences equivalent to those that would be affected by the Mitchell Alternative.

Corona noise and visibility of the proposed pole structures and overhead conductors would be encountered most frequently at locations where the Mitchell Alternative would cross existing roads and trails. Areas farther from existing roads and trails are typically visited by fewer users and visited less frequently because most recreation opportunities within the study area are associated with roads and trails. The existing NFS roads and trails that are located on NFS land and would be crossed by the Mitchell Alternative are identified in **Table 12**. The table is not inclusive of all unauthorized road and trails on NFS land that would be crossed because the creation of such roads and trails is unmanaged and often unknown. Additionally, the table does not include roads and trails that would be crossed that do not occur on NFS land, such as the private road between the California Substation and Dog Valley/Henness Pass Road in Verdi.

Table 12 Roads and Trails Crossed by the Mitchell Alternative

Road or Trail	Jurisdiction	Designated for Motor Vehicle Travel on the MVUM
Long Valley Road	Sierra County	County roads are open for motor vehicle travel but are not necessarily shown on the MVUM
Dog Valley/Henness Pass Road	Sierra County	County roads are open for motor vehicle travel but are not necessarily shown on the MVUM
Forest Road 41192	USFS	Yes, open to all vehicles; seasonal designations apply
Forest Road 41643	USFS	No, motorized vehicle use restricted to USFS administrative travel
Forest Road 41735	USFS	Yes, open to all vehicles
Forest Road 41668	USFS	Yes, open to all vehicles
USFS Trail 21514	USFS	Yes, trail open to all vehicles
USFS Trail 21511	USFS	Yes, trail open to all vehicles
USFS Trail 21301	USFS	Yes, trail open to motorcycles only
USFS Trail 21300	USFS	Yes, trail open to motorcycles only
Forest Road 31124	USFS	Yes, open to all vehicles; seasonal designations apply
Forest Road 31035	USFS	Yes, open to all vehicles
Forest Road 31005	USFS	No, motorized vehicle use restricted to USFS administrative travel
Forest Road 31002B	USFS	No, motorized vehicle use restricted to USFS administrative travel
Forest Road 31002A	USFS	No, motorized vehicle use restricted to USFS administrative travel

The Mitchell Alternative would also be visible from various locations outside of the study area, particularly areas where elevations provide high vantage points of the study area. The cleared corridor resulting from removal of trees within the forestland portions of the ROW/easement area is likely to be visible from farther distances than the proposed pole structures and overhead conductors would be. Visibility of the cleared corridor and proposed transmission line from distant areas outside of the study area would be expected to impact recreation activities that are strongly tied to natural settings containing little to no evidence of humans, such as scenic photography at a panoramic or landscape scale. The impact would be minor because the cleared corridor would include approximately 28.2 acres and would be within sight of many existing human modifications to the landscape, including Verdi, Bordertown, Interstate 80, U.S. Highway 395, other minor roads, and cleared corridors through forestland associated with existing power lines.

When maintenance of the proposed transmission line is required, project vehicles and equipment would use existing roads and motorized trails whenever possible and feasible. The use of existing roads and motorized trails for maintenance access would not be expected to cause meaningful increases in traffic congestion or delays. Motorized recreation activities on existing designated NFS roads and motorized trails would typically not be impacted by maintenance of the proposed project. The creation of new unauthorized routes by OHV recreationists in order to avoid traffic congestion or delays on designated roads and trails would not be an expected consequence of maintenance activities.

In areas where existing roads and motorized trails do not provide the required access for maintenance, restored access roads would be partially reopened for use by maintenance equipment. Maintenance activities may disturb the vegetation cover established since seeding was performed during initial restoration of the road following construction. Maintenance activities would also require that blockades be temporarily removed from the road for equipment access. The removal of the blockades and minor disturbance of vegetation cover may promote unauthorized motorized travel on the roads. Blockades would be replaced following maintenance activities, and maintenance crews would typically be present along the roads while blockades are removed. The presence of maintenance crews would be anticipated to deter unauthorized motorized travel on these roads because such travel is likely to be observed and reported. Blockades would be replaced following maintenance and seeding would be performed as necessary to restore vegetation cover disturbed by maintenance activities. The replacement of blockades and seeding of maintenance disturbance, combined with the minimal disturbance expected to restored conditions of temporary access roads would be expected to prevent unauthorized motorized use following maintenance activities. Additionally, unauthorized motorized use of these roads would be a violation of 36 CFR 261.13, and punishable by fine and possible imprisonment. The risk for fines and imprisonment would be anticipated to deter most OHV recreationists from maneuvering around blockades and travelling on restored temporary access roads following maintenance activities.

3.2.2.2 Conflict with the Roaded Natural ROS Class

Construction Activities

As discussed in **Section 3.2.2.1**, construction activities would temporarily increase the sights and sounds of humans within the study area. Increased sights and sounds of humans would alter the existing recreation setting within the study area. The social characteristics of the setting would change, particularly in portions of the study area away from existing roads. In portions of the study area not containing existing roads, the social characteristics of the setting would change such that the frequency of contact between a user and other persons would go from low or moderate to high. Construction equipment and improvements to existing roads would temporarily increase traffic congestion and users would be more likely to encounter other users on existing roads. The physical characteristics of setting would also change due to surface disturbance and creation of temporary new access roads for construction. Changes to the setting would alter the experiences users would gain from participating in certain activities within the study area. Experiences related to surrounding oneself with the sights and sounds of nature, observing wildlife in natural habitat, appreciation of forest character, and peacefulness would be diminished within the study area.

The *ROS Users Guide* (USFS 1982) describes the setting of the Roded Natural ROS class as being characterized by predominantly natural appearing environments with moderate evidence of the sights and sounds of man. Such evidences usually harmonize with the natural environment. According to the *ROS Users Guide*, users have about equal probability to encounter other persons as they do isolation from the sights and sounds of humans within the areas designated as Roded Natural ROS class. Although users would be unable to recreate in natural environments or isolate themselves from the sights and sounds of humans within the study area during construction, users would be able to find these conditions on NFS land nearby. Construction effects would be temporary and conditions within the study area would be expected to return to existing levels once construction is complete. The setting within the ROW area would not return to existing conditions due to the presence of the transmission line and vegetation removal during maintenance. These impacts are discussed under the operation and maintenance activities. Construction activities would not conflict with the Roded Natural ROS class.

Operation and Maintenance Activities

As specified in the *ROS Users Guide* (USFS 1982), the setting of the Roded Natural ROS class is characterized by predominantly natural appearing environments with moderate evidence of humans in the form of sights and sounds. Such evidences usually harmonize with the natural environment, as do resource modification and utilization practices. There is about an equal probability to experience affiliation with other user groups as there is for isolation from sights and sound of humans in areas classified as Roded Natural. Opportunities for both motorized and non-motorized forms of recreation are available to users within the Roded Natural ROS class.

As described in **Section 3.2.2.1**, operation and maintenance activities would alter the recreation setting within the ROW area and increase evidence of humans within the study area. Increased evidence would consists of the visual presence of the proposed transmission line, removal of the approximately 28.2 acres of forestland within the transmission line ROW, and corona noise generated along overhead conductors, particularly during rain or periods of high humidity. Removal of forest vegetation from the ROW area and presence of the pole structures and overhead conductors would alter the setting within most of the study area, except for areas where existing power lines occur. Predominantly natural appearing environments in which users can experience isolation from sights and sound of humans would be diminished within the study area. However, operation and maintenance of the proposed project would not conflict with the Roded Natural ROS class because there are many areas of NFS land nearby that would provide users with natural appearing environments and experiences of isolation from sights and sounds of humans.

3.2.2.3 Conflict with Recreation Management Direction and Standards

Implementation of the Mitchell Alternative would not conflict with the management direction or standards for recreation resources provided in the Forest Plan (USFS 1986). See **Sections 2.3.1.1** and **2.3.1.2** for a list of the recreation management direction and standards provided in the Forest Plan.

Implementation of the Mitchell Alternative would not conflict with the recreation goals and objectives stated in the BLM PRMP and ROD (BLM 2007 & 2008). See **Section 2.3.2.1** for a list of the recreation goals and objectives listed in the BLM PRMP and ROD.

3.2.3 Peavine Alternative

3.2.3.1 Disruption, Degradation, or Loss of Dispersed Recreation Opportunities

Construction Activities

Construction of the Peavine Alternative would be expected to create temporary traffic delays from the construction of widening improvements on existing designated NFS roads and motorized trails. The delays would be expected to be similar to those described for the Mitchell Alternative in **Section 3.2.2.1**. The existing designated NFS roads and motorized trails that would require widening improvements for construction access under the Peavine Alternative are presented in **Table 13**.

Table 13 Peavine Alternative: Designated NFS Road Widening

Route ID	Estimated Miles of Road/Trail Requiring Improvements on NFS Land	Estimated Miles of Road/Trail Requiring Improvements on Private Land
21514	0.36±	0
31002A	0.37±	0
31124	1.85±	0
41419	3.34±	0.88±
41419G	0	0.22±
41643	0.82±	0
41668	0.91±	0
41669	1.57±	3.97±
41735	0.79±	0
TOTAL	10.01±	5.07±

Temporary traffic delays would also result from encountering construction equipment travelling at relatively low speeds on designated NFS roads and motorized trails, regardless of whether the road or trail requires widening improvements. Dog Valley/Henness Pass Road would be used for access during construction of the approximately southern half of the Peavine Alternative. As described previously, Dog Valley/Henness Pass Road is a primary route used for access to the NFS land within the study area and vicinity, and traffic delays would be likely to affect more recreationists than they would on other roads and motorized trails in the study area. The delay

time on Dog Valley/Henness Pass Road would be negligible because the existing width of the travelled way is wide enough to all recreationists to frequently and safely pass slow-moving construction equipment.

Temporary traffic delays would reduce the time that would normally been available to recreationists to engage in recreation activities. The reduction in time is not anticipated to be more than several minutes because existing roads and trails are either wide enough to allow frequent passing, or widening improvements would include pullout areas which would make passing possible. The impact of traffic delays would be negligible due to the short delay periods, the limited miles of designated NFS roads and motorized trail that would require widening, and the limited number of these roads that may used for access at any given time during construction. With impacts negligible, it is anticipated that very few recreationists would avoid use of the NFS land within the study area as a consequence of traffic delays. A detailed description of the potential effects that the Peavine Alternative would have on the transportation network is provided in the *Specialist Report for Roads and Transportation Resources* (USFS 2013a).

There would be specific effects to motorized recreation from the widening of approximately 0.36 mile of USFS Trail 21514 for project construction access. Widening this section of the motorized trail would change the trail-like experiences to experiences associated more closely with motorized travel on roads. Effects would temporary because the trail would only be widened during project construction. The original width and conditions of USFS Trail 21514 would be restored following construction. Effects would be minor because of the temporary duration and because of the relatively short length of motorized trail that would be widened.

It is possible some OHV recreationists may choose to utilize non-designated routes or create new, unauthorized OHV routes on NFS land in reaction to the temporary traffic delays on existing designated NFS roads and motorized trails during construction. The potential creation of new, unauthorized OHV routes or the use of existing non-designated roads and trails for unauthorized motorized recreation during construction of the proposed project would have adverse effects on non-motorized recreation opportunities. Motor vehicles, particularly OHVs, produce mechanical noises that are relatively louder than natural sounds, such as bird songs, leaves rustling, and so forth. Most motor vehicles are also painted and typically contrast with the colors found in the natural environment. Thus, the presence of motor vehicles would reduce those recreation opportunities with experiences of solitude, peacefulness, and isolation from the sights and sounds of humans. The activities most directly related to these experiences include wildlife viewing, hunting, scenic photography, and other non-motorized activities typically participated in areas with quiet, natural settings where motor vehicles are not currently operated.

Motorized use of existing non-designated routes or the creation of new, unauthorized OHV routes on NFS land is illegal and prohibited per 36 CFR 261.13. Violators of 36 CFR 261.13 are subject to a fine of up to \$5,000, imprisonment for up to 6 months, or both. There are numerous existing designated NFS roads and motorized trails within nearby areas that would not be used for construction access. It is anticipated that most OHV recreationists affected by increased traffic congestion or delays would utilize these designated NFS roads and trails instead creating a new unauthorized route and face fines and possible imprisonment for violating 36 CFR 261.13. Most OHV recreationists would also be unlikely to create new unauthorized routes on NFS land during construction because use of existing designated roads and motorized trails for construction access would be short-term and temporary, and thus so would increased traffic congestion and delays.

Temporary new access roads constructed specifically for construction of the proposed project may also be used by OHV recreationists, although such use would be unauthorized and a violation of 36 CFR 261.13. Restoration and blockading of temporary new access roads would be anticipated to prevent unauthorized motorized travel on these roads after construction is completed. In the event that small sized OHVs are able to maneuver around blockades and travel on restored access roads, motorized recreation would occur in areas where only non-motorized recreation is currently possible. Unauthorized OHV use would contribute motorized sights and sounds to these areas. The motorized sights and sounds would adversely impact the experiences unique to non-motorized recreation, such as surrounding oneself with natural sights and sounds. The degree of degradation that these sights and sounds would have on non-motorized dispersed recreation opportunities would vary, depending on the experiences and settings that individual recreationists desire. Recreation opportunities for non-motorized recreation activities in settings specifically intended for experiences available only when motorized sounds and sights are absent would be most impacted. Impacts on these opportunities would be moderate. The impact would be moderate because recreationists who engage in these types of activities may be displaced from affected areas, but would be able to find similar settings on nearby NFS land that would not be crossed by temporary new access roads. Impacts from unauthorized OHV use on temporary restored access roads would be short term because if any such use occurs after construction and restoration, USFS OHV rangers would initiate monitoring of the roads per a cost recovery agreement with NV Energy (see **Section 1.2.4**). After monitoring is initiated, unauthorized use would be expected to stop soon thereafter due to the possible penalties of fines and imprisonment resulting from violation of 36 CFR 261.13.

Dispersed recreation within the study area may also be degraded temporarily by construction noise and visual impacts associated with operation of construction equipment. Noise attenuates as distance from the noise source increases. Thus, construction noise would generally impact the NFS land and BLM-administered public lands within close proximity to construction access

roads and the transmission line ROW. Visual impacts would also affect these areas because these areas are where construction equipment would be operated. Noise and visual effects on dispersed recreation that are related to construction of the proposed project would be temporary and of short duration, lasting only as long as required to complete construction activities in a given location. Temporary effects related to the visual presence of construction equipment and increased noise during construction would be anticipated to primarily affect non-motorized activities. Effects on non-motorized activities would be minor because there are other areas of NFS land within a reasonable distance that the sounds and sights of project construction would not affect. Effects on motorized activities would be negligible because experiences of solitude and isolation from sights and sounds of humans in natural settings are typically less important to motorized activities. A detailed and comprehensive description of the potential effects that the Peavine Alternative would have on visual resources is provided in the *Specialist Report for Visual Resources* (USFS 2013b).

Operation and Maintenance Activities

Operation and maintenance of the proposed transmission line would have effects on the recreation settings within the ROW/easement area for the Peavine Alternative, as well as the larger study area. Effects on the recreation settings would be the product of increased evidence of humans due to visibility of the proposed pole structures and overhead conductors, removal of forestland portions of the ROW/easement area, and corona noise. As a consequence to increased evidence of humans and effects on recreation settings, the associated recreation activities and experiences would be affected.

An approximately 0.4-mile section of the Peavine Alternative that would cross NFS land would be located next to the existing #102 transmission line. An additional approximately 0.1 mile section that would cross NFS land would replace an existing overhead distribution line as an under-build. Both of these sections of the Peavine Alternative would also be located next to Dog Valley/Henness Pass Road, which is regularly travelled and a primary access route to NFS land within the study area. The evidence of humans in this area is relatively high due to visibility of the existing transmission line and the sight and sound of vehicles travelling on Dog Valley/Henness Pass Road. Increases in the evidence of humans from the Peavine Alternative would have negligible impacts on recreation resources along this approximately 0.5-mile section because the existing recreation setting is characterized by evidence of humans. Changes to the recreation setting on BLM-administered public lands would also have negligible impacts because the proposed transmission line would be located next to the existing Alturas 345kV transmission line on BLM-administered public lands.

Other sections of the Peavine Alternative that would cross NFS land would not be located next to existing power lines. However, nearly all sections of the Peavine Alternative that would cross

NFS land are within 0.5 mile or closer of one or more existing NFS roads or trails. Motorized travel on these roads and trails typically occurs less frequently than on Dog Valley/Henness Pass Road, but nonetheless does contribute unnatural sights and sounds to the recreation setting intermittently. Visibility of the proposed pole structures would be a different type of evidence of humans than vehicles passing on nearby roads and trails and would be constantly present.

Corona noise would also increase the evidence of humans along these sections of the proposed transmission line. Due to the arid climate of the study area, corona noise would typically not affect the recreation setting in areas outside of the proposed transmission line ROW/easement area. Within the ROW/easement area, corona noise would reduce the area available for recreation opportunities associated with experiences of the sounds of nature. Corona noise would degrade recreation activities often associated with experiences of natural sounds, such as cross-country skiing or hunting.

Effects on recreation setting would be greatest in the approximately 20.6 acres of forestland that occur within the ROW/easement area for the Peavine Alternative. Approximately 16.9 acres of the forestland within the ROW/easement area occur on NFS land. Effects on recreation setting would be greatest in forestland areas because not only would the addition of the proposed pole structures, overhead conductors, and corona noise increase the evidence of humans, but the entire setting within the ROW/easement would also change from forestland to shrubland. Recreation activities that are strongly correlated with forestland setting, such as wildlife viewing, scenic photography, hunting, or cross-country skiing, would be degraded within the ROW/easement area. Recreation experiences related to the enjoyment of forest character would become unavailable within the ROW/easement area. Removal of the forestland cover from the ROW/easement area would also create a cleared corridor through the surrounding forestland in the study area on either side of the ROW/easement area. Visibility of the cleared corridor would impact activities strongly associated with natural settings with little human modifications, particularly scenic photography and viewing wildlife in natural habitat.

Within existing forestland settings on NFS land, the impact of the Peavine Alternative on recreation resources would be moderate and long term. Other sections of the proposed transmission line that would cross NFS land in settings other than forestland would have a long-term minor impact, except for the section that would be next to the existing #102 transmission line or replace the existing distribution line with an under-build. As described, impacts from these sections and the section that would cross BLM-administered public land, would be long term and negligible.

Most recreation opportunities within the study area are associated with motorized use of the existing roads and trails in the area. The intensity of the impacts may be less on motorized

activities because recreation settings that are highly natural with little to no evidence of humans are typically less important to motorized recreationists. Surrounding oneself with the sights and sounds of nature is typically not an experience that is desired from motorized recreation. Because most recreation opportunities within the study area are associated with use of the existing roads and trails, and impacts would be expected to be less intense on motorized recreation, the number of recreationists that would be displaced from the ROW/easement area would be minimal. There is NFS land within a reasonable distance that provides recreation settings and experiences equivalent to those that would be affected by the Peavine Alternative.

Corona noise and visibility of the proposed pole structures and overhead conductors would be encountered most frequently at locations where the Peavine Alternative would cross existing roads and trails. Areas farther from existing roads and trails are typically visited by fewer users and visited less frequently because most recreation opportunities within the study area are associated with roads and trails. The existing NFS roads and trails that are located on NFS land and would be crossed by the Peavine Alternative are identified in **Table 14**. The table is not inclusive of all unauthorized road and trails on NFS land that would be crossed because the creation of such roads and trails is unmanaged and often unknown. Additionally, the table does not include roads and trails that would be crossed that do not occur on NFS land, such as the private road between the California Substation and Dog Valley/Henness Pass Road in Verdi.

Table 14 Roads and Trails Crossed by the Peavine Alternative

Road or Trail	Jurisdiction	Designated for Motor Vehicle Travel on the MVUM
Long Valley Road	Sierra County	County roads are open for motor vehicle travel but are not necessarily shown on the MVUM
Dog Valley/Henness Pass Road	Sierra County	County roads are open for motor vehicle travel but are not necessarily shown on the MVUM
Forest Road 41735	USFS	Yes, open to all vehicles
Forest Road 41668	USFS	Yes, open to all vehicles
Forest Road 41643	USFS	No, motorized vehicle use restricted to USFS administrative travel
USFS Trail 21514	USFS	Yes, trail open to all vehicles
USFS Trail 21301	USFS	Yes, trail open to motorcycles only
USFS Trail 21300	USFS	Yes, trail open to motorcycles only
USFS Trail 21512	USFS	Yes, trail open to all vehicles
Forest Road 41419	USFS	Yes, open to all vehicles
Forest Road 41192	USFS	No, motorized vehicle use restricted to USFS administrative travel
Forest Road 31005	USFS	No, motorized vehicle use restricted to USFS administrative travel
Forest Road 31035	USFS	Yes, open to all vehicles

The Peavine Alternative would also be visible from various locations outside of the study area boundary, such as peaks, ridges, or other places where elevations provide a high vantage point. The cleared corridor resulting from removal of trees within the forestland portions of the

ROW/easement area is likely to be visible from farther distances than the actual pole structures and overhead conductors would be. Visibility of the cleared corridor and proposed transmission line from distant areas outside of the study area would be expected to impact recreation activities that are strongly tied to natural settings containing little to no evidence of humans, such as scenic photography at a panoramic or landscape scale. The impact would be minor because the cleared corridor would include approximately 20.6 acres and would be within sight of many existing human modifications to the landscape. Existing modifications include Verdi, Bordertown, Interstate 80, U.S. Highway 395, other minor roads, and cleared corridors through forestland associated with existing power lines.

When maintenance of the proposed transmission line is required, project vehicles and equipment would use existing roads and motorized trails whenever possible and feasible. The use of existing roads and motorized trails for maintenance access would not be expected to cause meaningful increases in traffic congestion or delays. Motorized recreation activities on existing designated NFS roads and motorized trails would typically not be impacted by maintenance of the proposed project. The creation of new unauthorized OHV routes in order to avoid traffic congestion or delays on designated roads and trails would not be an expected consequence of maintenance activities.

In areas where existing roads and motorized trails do not provide the required access for maintenance, restored access roads would be partially reopened for use by maintenance equipment. Maintenance activities may disturb the vegetation cover established since seeding was performed during initial restoration of the road following construction. Maintenance activities would also require that blockades be temporarily removed from the road for equipment access. The removal of the blockades and minor disturbance of vegetation cover may promote unauthorized motorized travel on the roads. Blockades would be replaced following maintenance activities, and maintenance crews would typically be present along the roads while blockades are removed. The presence of maintenance crews would be anticipated to deter unauthorized motorized travel on these roads because such travel is likely to be observed and reported. Blockades would be replaced following maintenance and seeding would be performed as necessary to restore vegetation cover disturbed by maintenance activities. The replacement of blockades and seeding of maintenance disturbance, combined with the minimal disturbance expected to restored conditions of temporary access roads would be expected to prevent unauthorized motorized use following maintenance activities. Additionally, unauthorized motorized use these roads would be a violation of 36 CFR 261.13, and punishable by fine and possible imprisonment. The risk for fines and imprisonment would be anticipated to deter most OHV recreationists from maneuvering around blockades and travelling on restored temporary access roads following maintenance activities.

3.2.3.2 Conflict with the Roaded Natural ROS Class

Construction Activities

As discussed in **Section 3.2.3.1**, construction activities would temporarily increase the sights and sounds of humans within the study area. Increased sights and sounds of humans would alter the existing recreation setting within the study area. The social characteristics of the setting would change, particularly in portions of the study area farthest away from existing roads. In portions of the study area not containing existing roads, the social characteristics of the setting would change such that the frequency of contact between a user and other persons would go from low or moderate to high. Construction equipment and improvements to existing roads would temporarily increase traffic congestion and users would be more likely to encounter other users on existing roads. The physical characteristics of setting would also change due to surface disturbance and creation of temporary new access roads for construction. Changes to the setting would alter the experiences users would gain from participating in certain activities within the study area. Experiences related to surrounding oneself with the sights and sounds of nature, observing wildlife in natural habitat, appreciation of forest character, and peacefulness would be diminished within the study area.

The *ROS Users Guide* (USFS 1982) describes the setting of the Roaded Natural ROS class as being characterized by predominantly natural appearing environments with moderate evidence of the sights and sounds of man. Such evidences usually harmonize with the natural environment. According to the *ROS Users Guide*, users have about equal probability to encounter other persons as they do isolation from the sights and sounds of humans within the areas designated as Roaded Natural ROS class. Although users would be unable to recreate in natural environments or isolate themselves from the sights and sounds of humans within the study area during construction, users would be able to find these conditions on NFS land nearby. Construction effects would be temporary and conditions within the study area would be expected to return to existing levels once construction is complete. The setting within the ROW area would not return to existing conditions due to the presence of the transmission line and vegetation removal during maintenance. These impacts are discussed under the operation and maintenance activities. Construction activities would not conflict with the Roaded Natural ROS class.

Operation and Maintenance Activities

As specified in the *ROS Users Guide* (USFS 1982), the setting of the Roaded Natural ROS class is characterized by predominantly natural appearing environments with moderate evidence of humans in the form of sights and sounds. Such evidences usually harmonize with the natural environment, as do resource modification and utilization practices. There is about an equal probability to experience affiliation with other user groups as there is for isolation from sights and sound of humans in areas classified as Roaded Natural. Opportunities for both motorized and non-motorized forms of recreation are available to users within the Roaded Natural ROS class.

As described in **Section 3.2.3.1**, operation and maintenance activities would alter the recreation setting within the ROW area and increase evidence of humans within the study area. Increased evidence would consist of the visual presence of the proposed transmission line, removal of the approximately 20.6 acres of forestland within the transmission line ROW, and corona noise generated along overhead conductors, particularly during rain or periods of high humidity. Removal of forest vegetation from the ROW area and presence of the pole structures and overhead conductors would alter the setting within most of the study area, except for areas where existing power lines occur. Predominantly natural appearing environments in which users can experience isolation from sights and sound of humans would be diminished within the study area. However, operation and maintenance of the proposed project would not conflict with the Roaded Natural ROS class because there are many areas of NFS land nearby that would provide users with natural appearing environments and experiences of isolation from sights and sounds of humans.

3.2.3.3 Conflict with Recreation Management Direction and Standards

Implementation of the Peavine Alternative would not conflict with the management direction or standards for recreation resources provided in the Forest Plan (USFS 1986). See **Sections 2.3.1.1** and **2.3.1.2** for a list of the recreation management direction and standards provided in the Forest Plan.

Implementation of the Peavine Alternative would not conflict with the recreation goals and objectives stated in the BLM PRMP and ROD (BLM 2007 & 2008). See **Section 2.3.2.1** for a list of the recreation goals and objectives listed in the BLM PRMP and ROD.

3.2.4 Poeville Alternative

3.2.4.1 Disruption, Degradation, or Loss of Dispersed Recreation Opportunities

Construction Activities

Construction of the Poeville Alternative would be expected to create temporary traffic delays from construction of widening improvements on existing designated NFS roads that are similar to those described for the other Action Alternatives. However, as presented in **Table 15**, construction of the Poeville Alternative would require relatively few designated NFS roads and no designated motorized trails to be temporarily widened.

Table 15 Poeville Alternative: Designated NFS Road Widening

Road ID	Estimated Miles of Road/Trail Requiring Improvements on NFS Land	Estimated Miles of Road/Trail Requiring Improvements on Private Land
41132	1.78±	2.22±
41649	0	0.08±
41666	0	0.12±

Road ID	Estimated Miles of Road/Trail Requiring Improvements on NFS Land	Estimated Miles of Road/Trail Requiring Improvements on Private Land
41669	0	3.44±
TOTAL	1.78±	5.86±

Construction equipment, particularly large-sized equipment, would generally travel at slower speeds than vehicles operated by the public and visitors of NFS land. Temporary traffic delays would also result from recreationists encountering construction equipment travelling on designated NFS roads, regardless of whether the road requires widening improvements. Most of the existing designated NFS roads within close proximity to the sections of the Poeville Alternative that would cross NFS land are lightly travelled. However, approximately 0.79 mile of the Poeville Alternative that would cross NFS land is located adjacent to existing Peavine Peak Road. Peavine Peak Road is a primary route used for access to NFS land and is travelled more frequently than most other roads and motorized trails in the surrounding study area. Consequently, it is likely that more recreationists would experience delays on Peavine Peak Road than on the other roads in the study area. However, the existing width of the travelled way of the road is wide enough to allow recreationists to frequently and safely pass construction equipment, and delay time would be negligible.

Temporary traffic delays would disrupt existing recreation opportunities by reducing the time that would have been otherwise available for visitors to engage in recreational activities. The reduction in time would not be anticipated to be more than several minutes because construction of the Poeville Alternative would require only a limited number of existing designated NFS roads and trails for access. Additionally, Peavine Peak Road would be anticipated to be a primary construction access road for the Poeville Alternative, and the existing travelled way is wide enough to allow recreationists to safely pass construction vehicles in most locations. The impact of traffic delays would be negligible due to the short delay periods, the limited miles of designated NFS roads that would require widening, and the limited number of these roads that may be used for access at any given time during construction. With impacts negligible, it is anticipated that very few recreationists would avoid use of the NFS land within the study area as a consequence of traffic delays. The potential impacts associated with OHV recreationists using non-designated routes or creating new, unauthorized routes on NFS land in reaction to traffic delays would not be expected to occur under the Poeville Alternative given the relatively few designated NFS roads that would be used for access or require widening improvements. A detailed and comprehensive description of the potential effects that the Poeville Alternative would have on the transportation network is provided in the *Specialist Report for Roads and Transportation Resources* (USFS 2013a).

While it would be possible for unauthorized OHV use on new temporary access roads constructed for the proposed project to occur, the NFS land that would be affected would be

negligible due to the limited miles of new temporary roads anticipated to be required. Approximately 0.8 mile of the Poeville Alternative that would cross NFS land would be located next to Peavine Peak road. Another approximately 0.6 mile section that would cross NFS land would be accessed from an existing unauthorized road beneath an existing power line that would be replaced as an under-build with the proposed transmission line. Construction of these section of the Poeville Alternative would not require any new temporary access roads be created. The remaining approximately 2.7 miles of the Poeville Alternative that would cross NFS land would be located next to or near an existing railroad track that is adjacent to an unpaved, non-designated road. It is possible that the unpaved road may be used for construction of some sections of the approximately 2.7 miles of the Poeville Alternative that it is near, which would reduce the miles of new temporary access road that would be required.

The impacts on recreation resources from unauthorized OHV use on new temporary access roads would be negligible due to the limited miles of new temporary access roads anticipated to be required on NFS land for construction access. Impacts would also be negligible because the existing recreation setting and experiences on NFS land crossed by the Poeville Alternative are characterized by the sights and sounds of vehicles travelling on existing roads, including Peavine Peak Road, North Virginia Street, and U.S. Highway 395. All temporary new access roads constructed on or across NFS would be restored upon completion of project construction; thus, impacts would be temporary.

Noise produced from the operation of project construction equipment would increase the existing level of motorized and mechanical noise within the study area. Increased noise would affect recreation setting by reducing the area available for recreation where natural or non-motorized sounds are dominant. Visibility of construction equipment and personnel would also affect recreation setting by increasing the evidence of humans and unnatural objects, such as construction trucks, within the study area. Effects on recreation setting would primarily impact non-motorized recreation because settings that provide experiences of natural sights and sounds are typically not important components of motorized activities. The impact on recreation resources, non-motorized or otherwise, would be negligible because the existing recreation setting on the NFS land crossed by the Poeville Alternative is characterized by moderate to high levels of motorized sights and sounds and evidence of humans. Such evidence includes regular motor vehicle travel on Peavine Peak Road, North Virginia Street, and U.S. Highway 395, visibility of these roads and other minor roads in the area, and visibility of existing power lines and residential structures. A detailed and comprehensive description of the potential effects that the Poeville Alternative would have on visual resources is provided in the *Specialist Report for Visual Resources* (USFS 2013b).

Operation and Maintenance Activities

Operation and maintenance of the proposed transmission line would have effects on the recreation settings within the ROW/easement area for the Poeville Alternative, as well as the larger study area. Effects on the recreation settings would be the product of increased evidence of humans due to visibility of the proposed pole structures and overhead conductors, removal of forestland portions of the ROW/easement area, and corona noise. As a consequence to increased evidence of humans and effects on recreation settings, the associated recreation activities and experiences would be affected.

The sections of the Poeville Alternative that would cross NFS land would either be adjacent to the existing Alturas 345 kV transmission line or would replace an existing overhead power line as an under-build. Additionally, the sections that would cross NFS land are next to either existing Peavine Peak Road, an unpaved road beneath the existing power line, or an existing railroad track, which has an unpaved road adjacent to it. U.S. Highway 395 and other existing minor roads are within sight of many sections of the Poeville Alternative that would cross NFS land. Evidence of humans on the NFS land that would be crossed by the Poeville Alternative is abundant due to visibility of the existing transmission line and power line and the sights and sounds of vehicles travelling on adjacent or nearby roads. Impacts on the recreation setting of NFS land from the Poeville Alternative would be negligible and long term because the existing recreation setting is characterized by evidence of humans. Changes to the recreation setting on BLM-administered public lands would also have negligible impacts because the proposed transmission line would be located next to the existing Alturas 345kV transmission line on BLM-administered public lands. Corona noise would also have negligible effects on recreation settings of NFS land and BLM-administered public lands because such noise is currently produced by the Alturas 345 kV transmission line and the overhead power line that would be replaced as an under-build.

There are approximately 3.4 acres of forestland within the ROW/easement area for the Poeville Alternative. However, the 3.4 acres of forestland occurs entirely on private land. Therefore, the more moderate impacts on recreation setting associated with conversion of forestland to shrubland would not occur on NFS land under implementation of the Poeville Alternative. Removal of the forestland within the ROW/easement area would create cleared corridors that are visible from NFS land within the study area. Visibility of the cleared corridor would impact activities strongly associated with natural settings with little human modifications, particularly scenic landscape photography and wildlife photography. The impact would be negligible because there are existing human modifications visible in the same landscape.

Because most recreation opportunities within the study area are associated with the existing roads and trails in the area, corona noise and visibility of the proposed pole structures and overhead conductors would be encountered most frequently at locations where the proposed

transmission line would cross existing roads and trails. Areas farther from existing roads and trails are typically visited by fewer users and visited less frequently. The existing NFS roads and trails that are located on NFS land and would be crossed by the Poeville Alternative are identified in **Table 16**. The table is not inclusive of all unauthorized road and trails on NFS land that would be crossed because the creation of such roads and trails is unmanaged and often unknown. Additionally, the table does not include roads and trails that would be crossed that do not occur on NFS land, such as Bridge Street in Verdi, which would be crossed in two separate locations.

Table 16 Roads and Trails Crossed by the Poeville Alternative

Road or Trail	Jurisdiction	Designated for Motor Vehicle Travel on the MVUM
Long Valley Road	Sierra County	County roads are open for motor vehicle travel but are not necessarily shown on the MVUM
Forest Road 41666	USFS	Yes, open to all vehicles
Bull Ranch Road	Washoe County	County roads are open for motor vehicle travel but are not necessarily shown on the MVUM
Peavine Peak Road	Washoe County	County roads are open for motor vehicle travel but are not necessarily shown on the MVUM
Unnamed private road on north slope of Peavine Peak beneath existing power line	N/A	Private road across NFS land; motor vehicle travel by USFS authorization only

Aside from existing roads and motorized trails, the Poeville Alternative would also cross an existing interpretive trail located on private land next to the Verdi Public Library (**Figure 3**). Although the trail is located on private land, it is intended for use by the general public. The trail is currently beneath the existing #141 and #106 transmission lines. The proposed transmission line would be located immediately adjacent to these existing transmission lines. The addition of the proposed transmission line would have negligible effects on the recreation setting of the trail because pole structures and overhead conductors are prominent components of the existing setting in this area. The impact of the Poeville Alternative on recreation opportunities associated with the trail would be negligible and long term.

The Poeville Alternative would also cross the Truckee River in two separate locations. At each crossing, the proposed transmission line would be located immediately adjacent to the existing #141 and #106 transmission lines. The addition of the proposed transmission line would have negligible effects on the recreation setting at both locations where the river would be crossed because pole structures and overhead conductors are prominent components of the existing setting in these areas. The impact of the Poeville Alternative on recreation opportunities associated with the Truckee River would be negligible and long term.

The Poeville Alternative would be visible from various locations outside of the study area boundary with elevations sufficient enough to provide a high vantage point of the ROW/easement area. The cleared corridor resulting from removal of trees within the forestland portions of the ROW/easement area would be likely to be visible from farther distances than would be the proposed pole structures and overhead conductors. Visibility of the cleared corridor and proposed transmission line from distant areas outside of the study area would be expected to impact recreation opportunities very dependent on natural settings that contain little to no evidence of humans, such as scenic photography at a panoramic or landscape scale. The impact would be negligible because the cleared corridor would also be within sight of many existing human modifications to the landscape, including Verdi, Bordertown, Interstate 80, U.S. Highway 395, commercial development along the interstate and highway, other minor roads, and other cleared corridors through forestland associated with existing power lines. Additionally, the cleared corridor would contain only approximately 3.4 acres.

During maintenance of the proposed transmission line, project vehicles and equipment would use existing roads whenever possible and feasible. Most sections of the Poeville Alternative that would cross NFS land would be located next to Peavine Peak Road or an existing unpaved road that intersects Peavine Peak Road. It is anticipated that both of these roads would be used for construction and maintenance of the proposed transmission line. Thus, the number of temporary new access roads which would be created during construction and subsequently used for maintenance on NFS land would be minimal. The use of existing roads for maintenance access would not be expected to cause meaningful increases in traffic congestion or delays. Motorized recreation activities on existing designated NFS roads and motorized trails would typically not be impacted by maintenance of the proposed project. The creation of new unauthorized OHV routes in order to avoid traffic congestion or delays on designated roads and trails would not be an expected consequence of maintenance activities.

Although existing roads would be anticipated to be sufficient for construction and maintenance access on NFS land, temporary new access roads may be required on private land and may be subsequently used for maintenance access. Because these roads would cross private land, OHV recreationists would not be anticipated to use them for access to nearby areas of NFS land where motorized recreation is not permissible. Thus, the Poeville Alternative is not anticipated to have any impacts on recreation resources on NFS land resulting from unauthorized motorized travel. Impact on BLM-administered public lands would not be anticipated because there are existing roads that would be sufficient for maintenance of the proposed transmission line.

3.2.4.2 Conflict with the Roded Natural ROS Class

Construction Activities

The *ROS Users Guide* (USFS 1982) describes the setting of the Roded Natural ROS class as being characterized by predominantly natural appearing environments with moderate evidence of the sights and sounds of man. Such evidences usually harmonize with the natural environment. According to the *ROS Users Guide*, users have about equal probability to encounter other persons as they do isolation from the sights and sounds of humans within the areas designated as Roded Natural ROS class.

Temporary increases of traffic congestion or delays resulting from construction equipment of construction of road improvements would increase the likelihood for users to encounter other persons on existing roads. However, the sections of the proposed transmission line that would cross NFS land would either be located adjacent to Peavine Peak Road or would not be located next to a designated NFS road or trail. Motorized use of Peavine Peak Road is common relative to other designated NFS roads and motorized trails in the area, and users travelling on the road are currently likely to encounter other persons. Traffic congestion or delays would not affect the other sections of the transmission line that would cross NFS land because motorized travel is not authorized in these areas. Non-motorized users in these areas may encounter construction personnel, but the probability for these users to encounter other users on NFS land located nearby would not be affected because there are many areas of NFS land where construction personnel would not be present.

Existing evidence of the sights and sounds of humans on the NFS land within the study area is currently high. Major evidences include the noise and sight of motorized vehicle travel on Peavine Peak Road and U.S. Highway 395. There are also existing transmission lines, distribution power lines, minor unpaved roads, residential structures, street lamps, road signs, and other road infrastructure visible from the NFS land within the study area. Although construction activities would increase evidence of sights and sounds of humans within the study area, such increases would be temporary and would not cause an increase in evidence above moderate because evidence already exceeds moderate. Construction activities would not conflict with the Roded Natural ROS class.

Operation and Maintenance Activities

As described in **Section 3.2.4.1**, operation and maintenance activities would increase the evidence of humans within the study area, but would not change the recreation setting. The recreation setting would not be changed because the sections of the Poeville Alternative that would cross NFS land would be next to an existing transmission line or would replace an existing distribution line as an under-build. These sections of the proposed transmission line would also be located adjacent to an existing railroad track, Peavine Peak Road, or an unpaved

road that intersects Peavine Peak Road. The existing recreation setting of the NFS land that would be crossed by the Poeville Alternative is characterized by an abundance of evidence of humans due to the existing railroad track, roads, and power lines. Thus, the Poeville Alternative would not impact recreation setting, experiences, or activities, and would therefore not conflict with the Roded Natural ROS class.

3.2.4.3 Conflict with Recreation Management Direction and Standards

Implementation of the Poeville Alternative would not conflict with the management direction or standards for recreation resources provided in the Forest Plan (USFS 1986). See **Sections 2.3.1.1** and **2.3.1.2** for a list of the recreation management direction and standards provided in the Forest Plan.

Implementation of the Poeville Alternative would not conflict with the recreation goals and objectives stated in the BLM PRMP and ROD (BLM 2007 & 2008). See **Section 2.3.2.1** for a list of the recreation goals and objectives listed in the BLM PRMP and ROD.

3.2.5 Peavine/Poeville Alternative

3.2.5.1 Disruption, Degradation, or Loss of Dispersed Recreation Opportunities

Construction Activities

Construction of the Peavine/Poeville Alternative would be expected to create temporary traffic delays from construction of widening improvements on existing designated NFS roads and motorized trails that are similar to those described for the Mitchell and Peavine Alternatives. The existing designated NFS roads and motorized trails that would require widening improvements for construction access under the Peavine/Poeville Alternative are presented in **Table 17**.

Table 17 Peavine/Poeville Alternative: Designated NFS Road Widening

Road ID	Estimated Miles of Road/Trail Requiring Improvements on NFS Land	Estimated Miles of Road/Trail Requiring Improvements on Private Land
21514	0.36±	0
41132	1.78±	2.22±
41419	2.67±	0.88±
41419G	0	0.22±
41643	0.82±	0
41668	0.91±	0
41669	1.57±	3.97±
41735	0.79±	0
TOTAL	8.9±	7.29±

Temporary traffic delays would also result from recreationists encountering construction equipment travelling at relatively low speeds on designated NFS roads and motorized trails, regardless of whether the road or trail requires widening improvements. Most of the existing

designated NFS road and motorized trails within close proximity to the sections of the Peavine/Poeville Alternative that would cross NFS land are lightly travelled. However, existing Peavine Peak Road may be used as construction access for some sections of the Peavine/Poeville Alternative, especially central sections. As described previously, Peavine Peak Road is a primary route used for access to the NFS land within the study area and vicinity, and traffic delays would be likely to affect more recreationists than they would on other roads and motorized trails in the study area. However, the existing width of the travelled way of the road is wide enough to allow recreationists to frequently and safely pass construction equipment, and delay time would be negligible.

Temporary traffic delays would disrupt existing recreation opportunities by reducing the time that would have been otherwise available for visitors to engage in recreational activities. The reduction in time would not be anticipated to be more than several minutes because existing roads and trails are either wide enough to allow frequent passing, or widening improvements would include pullout areas which would make passing possible. With impacts negligible, it is anticipated that very few recreationists would avoid use of the NFS land within the study area as a consequence of traffic delays. A detailed and comprehensive description of the potential effects that the Peavine/Poeville Alternative would have on the transportation network is provided in the *Specialist Report for Roads and Transportation Resources* (USFS 2013a).

There would be specific effects to motorized recreation from the widening of approximately 0.36 mile of USFS Trail 21514 for project construction access. Widening this section of the motorized trail would change the trail-like experiences to experiences associated more closely with motorized travel on roads. Effects would temporary because the trail would only be widened during project construction. The original width and conditions of USFS Trail 21514 would be restored following construction. Effects would be minor because of the temporary duration and because of the relatively short length of motorized trail that would be widened.

Despite the negligible temporary traffic delays during project construction, some OHV recreationists may choose to use non-designated routes or create new, unauthorized roads or trails on NFS land in reaction to the traffic delays. Such use would introduce motor vehicles to areas of NFS land where they are currently not operated. This would alter the recreation setting of these areas by increasing the level of unnatural or motorized sights that are present. The area of NFS land within the study area with a recreation setting providing experiences of natural sights and sounds, such as bird calls or leaves rustlings would be reduced.

Effects on recreation setting would primarily impact non-motorized recreation because settings that provide experiences of natural sights and sounds are typically not as important for motorized activities. Some of the non-motorized activities that would be anticipated to be most directly

impacted include wildlife viewing, hunting, and scenic photography. Any activity that recreationists seek for experiences of quiet solitude, sounds of nature, or temporary escape from everyday urban or suburban commotion would also be impacted. The intensity of the impacts would be negligible because there are numerous existing designated NFS roads and motorized trails within nearby areas that would not be used for construction access. It is anticipated that most OHV recreationists affected by increased traffic congestion or delays would utilize these designated NFS roads and trails instead creating a new unauthorized route and face fines and possible imprisonment for violating 36 CFR 261.13. Most OHV recreationists would also be unlikely to create new unauthorized routes on NFS land in reaction to construction traffic delays because delay times are negligible and temporary.

New temporary access roads constructed specifically for access to construct the Peavine/Poeville Alternative may also be used by OHV recreationists, although OHV use of these roads would be unauthorized and also in violation of 36 CFR 261.13. Unauthorized OHV travel would introduce motor vehicles to areas of NFS land where they are currently not operated. The recreation setting in these areas would be altered from the increased level of unnatural sights and sounds associated with motor vehicles. The area of NFS land within the study area with a recreation setting providing experiences of natural sights and sounds, such as bird calls or leaves rustlings would be reduced. The opportunity for dispersed non-motorized recreation activities in natural settings, such as hunting, would be impacted the most because experiences with little to no motorized or unnatural sights and sounds are most important to these activities. Impacts on recreation resources would be moderate because recreationists who engage in these types of activities may be displaced from NFS land within the study area, but would be able to find similar settings on nearby NFS land that would not be crossed by new temporary access roads.

Noise produced from the operation of project construction equipment would increase the existing level of motorized and mechanical noise within the study area. Increased noise would affect recreation setting by reducing the area available for recreation where natural or non-motorized sounds are dominant. Visibility of construction equipment and personnel would also affect recreation setting by increasing the evidence of humans and unnatural objects, such as construction trucks, within the study area. Effects on recreation setting would primarily impact non-motorized recreation because settings that provide experiences of natural sights and sounds are typically not important components of motorized activities. The impact on recreation resources, non-motorized or otherwise, would be negligible because construction in along any given section of the Peavine/Poeville Alternative would be brief and because there are existing motorized trails within close proximity to sections of the alternative that would cross NFS land. Existing travel on these roads contribute some motorized sights and sounds to the study area, although generally infrequently and briefly. A detailed and comprehensive description of the

potential effects that the Peavine/Poeville Alternative would have on visual resources is provided in the *Specialist Report for Visual Resources* (USFS 2013b).

Operation and Maintenance Activities

Operation and maintenance of the Peavine/Poeville Alternative would increase the evidence of humans within the study area. Increased evidence of humans would be due to visibility of the proposed pole structures and overhead conductors, removal of forestland portions of the ROW/easement area, and corona noise. Increases in the evidence of humans would have effects on the recreation opportunities within the study area by causing changes to recreation settings and experiences.

Nearly all sections of the Peavine/Poeville Alternative that would cross NFS land are within 0.5 mile or less of one or more existing roads or trails. The existing recreation setting contains some evidence of humans due to the sight and sound of vehicles travelling on these roads and trails, as well as the sight of the actual roads and trails. The proposed pole structures and overhead conductors would be a different type of visual evidence of humans than roads and trails and the vehicles travelling on them. The proposed transmission line would be constantly present evidence of humans whereas passing vehicles on existing roads and trails would be intermittently present.

Corona noise would also increase the evidence of humans along these sections of the proposed transmission line. Due to the arid climate of the study area, corona noise would typically not affect the recreation setting in areas outside of the proposed transmission line ROW/easement area. Within the ROW/easement area, corona noise would reduce the area available for recreation opportunities associated with experiences of the sounds of nature. Corona noise would degrade recreation activities often associated with experiences of natural sounds, such as cross-country skiing or hunting.

Effects on recreation setting would be greatest in the approximately 12.3 acres of forestland that occur within the ROW/easement area for the Peavine/Poeville Alternative. Approximately 8 acres of the forestland occur on NFS land and the remaining approximately 4.3 acres occur on private land. Effects on recreation setting would be greatest in forestland areas because in addition to increased evidence of humans from the proposed transmission line and corona noise, the entire setting of the 12.3 acres of forestland would change to shrubland. Removal of the forestland cover from the ROW/easement area would also create a cleared corridor through the surrounding forestland in the study area on either side of the ROW/easement area. Visibility of the cleared corridor would impact activities strongly associated with natural settings with little human modifications. Recreation experiences related to the enjoyment of forest character would become unavailable within the ROW/easement area. Recreation activities that are strongly

correlated these experiences and with forestland setting would be degraded within the ROW/easement area. These activities would include wildlife viewing, scenic photography, hunting, and cross-country skiing. Such activities, but especially hunting, may also be degraded by the alteration of wildlife habitat that would occur from removal of forestland habitat. A detailed and comprehensive description of the potential effects that the Peavine/Poeville Alternative would have on wildlife is provided in the *Wildlife Specialist Report* (USFS 2013c).

Within existing forestland settings, the Peavine/Poeville Alternative would have minor, long-term impacts on recreation resources. Impacts on forestland settings on NFS land would be minor because removal of approximately 8 acres forestland would impact a small but measureable portion of the forestland on NFS land in the surrounding vicinity. Other sections of the proposed transmission line that would cross NFS land with settings other than forestland would also have minor, long-term impacts. Sections of the Peavine/Poeville Alternative that cross BLM-administered public land would be adjacent to the existing Alturas 345 kV line and cross shrubland cover. The pole structures and overhead conductors associated with the existing Alturas 345 kV transmission line are dominant components of the current recreation setting. The addition of the proposed pole structures and overhead conductors and any potential corona noise would have negligible effects on the recreation setting of the BLM-administered public land within the study area.

Most recreation opportunities within the study area are associated with the existing roads and trails in the area. The intensity of the impacts may be less on motorized activities associated with existing roads and trails because recreation settings that are highly natural with little to no evidence of humans is typically less important to motorized recreationists. Surrounding oneself with the sights and sounds of nature is typically not an experience that is desired from motorized recreation. Because most recreation opportunities within the study area are associated with use of the existing roads and trails and the impacts would be expected to be less intense on motorized recreation, the number of recreationists that would be displaced from the ROW/easement area would be minimal. There is NFS land within a reasonable distance that provides recreation settings and experiences equivalent to those that would be affected by the Peavine/Poeville Alternative.

Corona noise and visibility of the proposed pole structures and overhead conductors would be encountered most frequently at locations where the Peavine/Poeville Alternative would cross existing roads and trails. Areas farther from existing roads and trails are typically visited by fewer users and visited less frequently because most recreation opportunities within the study area are associated with roads and trails. The existing NFS roads and trails that are located on NFS land and would be crossed by the Peavine/Poeville Alternative are identified in **Table 18**. The table is not inclusive of all unauthorized road and trails on NFS land that would be crossed

because the creation of such roads and trails is unmanaged and often unknown. Additionally, the table does not include roads and trails that would be crossed that do not occur on NFS land, such as Bridge Street in Verdi, which would be crossed in two separate locations.

Table 18 Roads and Trails Crossed by the Peavine/Poeville Alternative

Road or Trail	Jurisdiction	Designated for Motor Vehicle Travel on the MVUM
Long Valley Road	Sierra County	County roads are open for motor vehicle travel but are not necessarily shown on the MVUM
Dog Valley/Henness Pass Road	Sierra County	County roads are open for motor vehicle travel but are not necessarily shown on the MVUM
Bull Ranch Road	Washoe County	County roads are open for motor vehicle travel but are not necessarily shown on the MVUM
Forest Road 41735	USFS	Yes, open to all vehicles
Forest Road 41668	USFS	Yes, open to all vehicles
Forest Road 41643	USFS	No, motorized vehicle use restricted to USFS administrative travel
USFS Trail 21514	USFS	Yes, trail open to all vehicles
USFS Trail 21301	USFS	Yes, trail open to motorcycles only
USFS Trail 21300	USFS	Yes, trail open to motorcycles only
USFS Trail 21512	USFS	Yes, trail open to all vehicles
Forest Road 41419	USFS	Yes, open to all vehicles
Forest Road 21304	USFS	Yes, trail open to motorcycles only

Aside from existing roads and motorized trails, the Peavine/Poeville Alternative would also cross an existing interpretive trail located on private land next to the Verdi Public Library (**Figure 3**). The trail is located beneath the existing #141 and #106 transmission lines. The proposed transmission line would be located immediately adjacent to these existing transmission lines. The addition of the proposed transmission line would have negligible effects on the recreation setting of the trail because pole structures and overhead conductors are prominent components of the existing setting in this area. The Peavine/Poeville Alternative would also cross the Truckee River in two separate locations. At each crossing, the proposed transmission line would be located immediately adjacent to the existing #141 and #106 transmission lines. The addition of the proposed transmission line would have negligible effects on the recreation setting at both locations where the river would be crossed because pole structures and overhead conductors are prominent components of the existing setting in these areas. The impact of the Peavine/Poeville Alternative on recreation opportunities associated with the Truckee River would be negligible and long term.

The Peavine/Poeville Alternative would be visible from various locations outside of the study area boundary, such as areas where elevations are sufficient enough to provide a high vantage point of the ROW/easement area. The cleared corridor resulting from removal forestland portions of the ROW/easement area would be likely to be visible from farther distances than would be the proposed pole structures and overhead conductors. Visibility of the cleared corridor and proposed transmission line from distant areas outside of the study area would be expected to

impact recreation opportunities that are very dependent on natural settings with little to no evidence of humans, such as scenic photography at a panoramic or landscape scale. The impact would be minor because the cleared corridor would include approximately 12.3 acres and would be within sight of many existing human modifications to the landscape. Existing modifications that the corridor would be within sight of include Verdi, Bordertown, Interstate 80, U.S. Highway 395, other minor roads, and cleared corridors through forestland associated with existing power lines.

When maintenance of the proposed transmission line is required, project vehicles and equipment would use existing roads and motorized trails whenever possible and feasible. The use of existing roads and motorized trails for maintenance access would not be expected to cause meaningful increases in traffic congestion or delays. Motorized recreation activities on existing designated NFS roads and motorized trails would typically not be impacted by maintenance of the proposed project. The creation of new unauthorized OHV routes in order to avoid traffic congestion or delays on designated roads and trails would not be an expected consequence of maintenance activities.

In areas where existing roads and motorized trails do not provide the required access for maintenance, restored access roads would be partially reopened for use by maintenance equipment. Maintenance activities may disturb the vegetation cover established since seeding was performed during initial restoration of the road following construction. Maintenance activities would also require that blockades be temporarily removed from the road for equipment access. The removal of the blockades and minor disturbance of vegetation cover may promote unauthorized motorized travel on the roads. Blockades would be replaced following maintenance activities, and maintenance crews would typically be present along the roads while blockades are removed. The presence of maintenance crews would be anticipated to deter unauthorized motorized travel on these roads because such travel is likely to be observed and reported. Blockades would be replaced following maintenance and seeding would be performed as necessary to restore vegetation cover disturbed by maintenance activities. The replacement of blockades and seeding of maintenance disturbance, combined with the minimal disturbance expected to restored conditions of temporary access roads would be expected to prevent unauthorized motorized use following maintenance activities. Additionally, unauthorized motorized use of these roads would be a violation of 36 CFR 261.13, and punishable by fine and possible imprisonment. The risk for fines and imprisonment would be anticipated to deter most OHV recreationists from maneuvering around blockades and travelling on restored temporary access roads following maintenance activities.

3.2.5.2 Conflict with the Roaded Natural ROS Class

Construction Activities

As discussed in **Section 3.2.5.1**, construction activities would temporarily increase the sights and sounds of humans within the study area. Increased sights and sounds of humans would alter the existing recreation setting within the study area. The social characteristics of the setting would change, particularly in portions of the study area farthest away from existing roads. In portions of the study area not containing existing roads, the social characteristics of the setting would change such that the frequency of contact between a user and other persons would go from low or moderate to high. Construction equipment and improvements to existing roads would temporarily increase traffic congestion and users would be more likely to encounter other users on existing roads. The physical characteristics of setting would also change due to surface disturbance and creation of temporary new access roads for construction. Changes to the setting would alter the experiences users would gain from participating in certain activities within the study area. Experiences related to surrounding oneself with the sights and sounds of nature, observing wildlife in natural habitat, appreciation of forest character, and peacefulness would be diminished within the study area.

The *ROS Users Guide* (USFS 1982) describes the setting of the Roaded Natural ROS class as being characterized by predominantly natural appearing environments with moderate evidence of the sights and sounds of man. Such evidences usually harmonize with the natural environment. According to the *ROS Users Guide*, users have about equal probability to encounter other persons as they do isolation from the sights and sounds of humans within the areas designated as Roaded Natural ROS class. Although users would be unable to recreate in natural environments or isolate themselves from the sights and sounds of humans within the study area during construction, users would be able to find these conditions on NFS land nearby. Construction effects would be temporary and conditions within the study area would be expected to return to existing levels once construction is complete. The setting within the ROW/easement area would not return to existing conditions due to the presence of the transmission line and vegetation removal during maintenance. These impacts are discussed under the operation and maintenance activities. Construction activities would not conflict with the Roaded Natural ROS class.

Operation and Maintenance Activities

As described in **Section 3.2.5.1**, operation and maintenance activities would alter the recreation setting within the ROW area and increase evidence of humans within the study area. Increased evidence would consist of the visual presence of the proposed transmission line, removal of the approximately 12.3 acres of forestland within the transmission line ROW/easement, and corona noise generated along overhead conductors, particularly during rain or periods of high humidity. Removal of forest vegetation from the ROW/easement area and presence of the pole structures and overhead conductors would alter the setting within most of the study area. Predominantly

natural appearing environments in which users can experience the sounds and sights of nature would be diminished within the study area. However, operation and maintenance of the proposed project would not conflict with the Roded Natural ROS class because there are many areas of NFS land nearby that would provide users with natural appearing environments and experiences of isolation from sights and sounds of humans.

3.2.5.3 Conflict with Recreation Management Direction and Standards

Implementation of the Peavine/Poeville Alternative would not conflict with the management direction or standards for recreation resources provided in the Forest Plan (USFS 1986). See **Sections 2.3.1.1** and **2.3.1.2** for a list of the recreation management direction and standards provided in the Forest Plan.

Implementation of the Peavine/Poeville Alternative would not conflict with the recreation goals and objectives stated in the BLM PRMP and ROD (BLM 2007 & 2008). See **Section 2.3.2.1** for a list of the recreation goals and objectives listed in the BLM PRMP and ROD.

4.0 CUMULATIVE IMPACTS

A cumulative impact is one which results from the incremental impact of the proposed project when combined with other past, present, or reasonably foreseeable future actions that occur within the geographic extent of the cumulative effects analysis.

4.1 CUMULATIVE IMPACT ANALYSIS AREA

The geographic extent of the cumulative effects analysis, referred to herein as the Cumulative Impacts Analysis Area (CIAA), coincides with the boundaries of the study area. As described in **Section 2.1**, the study area includes all areas within 2 miles of the centerline of the proposed transmission line alignment for each Action Alternative and all areas within 2 miles of the California and Bordertown substations (**Figure 3**). This area was selected as the CIAA because each Action Alternative would be unlikely to have any measureable incremental effects on recreation resources outside of the boundaries of this area.

4.2 PAST, PRESENT, AND REASONABLY FORESEEABLE FUTURE ACTIONS

The past and present actions in the CIAA that have cumulative impacts on recreation resources include transportation networks and utility corridors. The reasonably foreseeable future actions that would be anticipated to have cumulative impacts on recreation resources include continuation of the past and present actions. These actions are discussed in more detail below.

Transportation Networks

The transportation network consists of hundreds of miles of roads and routes that cross or occur within the CIAA and are travelled by motorists. Some of these roads and appear on the MVUM (USFS 2011), designating them as legal routes for motorized travel across NFS land. Other roads in the transportation network include those that cross NFS land that are not shown on the MVUM; roads that cross private land in the CIAA; motorcycles trails; Interstate 80 and U.S. Highway 395; arterial and collector roads that are either city-, county-, or state-maintained, such as Bridge Street; and other minor roads that are privately-maintained or not maintained.

The impacts that the transportation network has had on recreation resources are primarily associated with the increased evidence of humans in the CIAA. The effects include the sight of the actual roadways and road corridors, sight of vehicles and vehicle lights, and traffic-related noise that is audible beyond the roadway. Effects also include increased human presence due to improved or new accessibility to recreational opportunities, and reduction of the area available for non-motorized recreation where evidence of humans is minimal to absent.

Utility Corridors

Utility corridors in the CIAA include numerous overhead power transmission lines, short segments of underground power transmission lines, a buried gas pipeline, overhead and buried communication lines, and buried water and sewer pipelines. Many of these utilities are associated with urban development near the perimeter of the CIAA, or parallel existing roads. The impacts on recreation resources associated with utility corridors are therefore considered collectively with the impacts that urban development and transportation corridors have had.

4.3 CUMULATIVE IMPACTS BY ALTERNATIVE

Impacts of an alternative would be cumulatively considerable if they would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects described in **Section 4.2**. The recreation impacts identified in **Section 3.2** for each alternative would be cumulatively considerable, in that each impact would have the potential to combine with similar impacts of other past, present, or reasonably foreseeable projects. As such, each of the recreation effects discussed in **Section 3.2** for each alternative would have an incremental effect on the cumulative scenario. The potential for cumulatively considerable recreation impacts of the each alternative to combine with similar impacts of other projects within the CIAA are described below.

4.3.1 No Action Alternative

Under the No Action Alternative, there would be no direct or indirect effects to existing recreational uses or opportunities and no impact on recreation resources (see **Section 3.2.1**). Since there would be no impact anticipated to result from implementation of the No Action Alternative, there would be no impact to consider alongside impacts from other past, present, and reasonably foreseeable future projects located within the CIAA boundary. Accordingly, the No Action Alternative would not have any cumulatively considerable impacts on recreation resources.

4.3.2 Mitchell Alternative

Construction activities associated with the Mitchell Alternative would result in temporary increases of traffic congestion or delays on existing roads and motorized trails used for construction access. If maintenance or repair of roads and motorized trails in the existing transportation networks occur within the CIAA and at the same time as construction of the proposed project, the resulting impacts would be cumulatively considerable to recreation resources. The cumulative impact would be negligible because construction would be temporary and maintenance of the proposed project would not be expected to cause meaningful traffic congestion or delays. The temporary, brief duration of construction would make it unlikely for

very many existing roads or trails in the transportation networks to undergo repair or maintenance at the same time.

As described in **Section 3.2.2.1**, temporary new access roads that are installed to facilitate project construction and, depending on the location of the road, potential project maintenance may be used for unauthorized motorized recreation. Unauthorized motorized recreation would contribute to the degradation of non-motorized recreational opportunities. From a cumulative perspective, the existing transportation networks within the CIAA have resulted in the construction of many roads and motorized trails, some of which inevitably facilitate unauthorized motorized recreation or unmanaged recreational uses. Therefore, any additional unauthorized motorized recreation that occurs specifically from temporary new access roads constructed for the proposed project would be cumulatively considerable. The Mitchell Alternative includes design features that would help to reduce the proposed project's incremental contribution to unauthorized motorized recreation uses within the CIAA. The cumulative impact of the Mitchell Alternative would be minor because there would be small changes to the existing cumulative conditions associated with unauthorized motorized use within the CIAA. The design feature requiring monitoring of temporary restored access roads by USFS OHV rangers if unauthorized use occurs would limit the cumulative impact to short-term.

The proposed project would increase the evidence of humans in the CIAA due to visibility of the proposed transmission line, and from corona noise. Evidence would also increase temporary during construction due to visibility of construction equipment and crews, and from noise produced from construction equipment. From a cumulative perspective, most of the area within the CIAA contains some evidence of humans in the form of existing roads or motorized trails. Locations from which existing transportation networks cannot be seen are generally within 0.5 mile or closer to the nearest road or trail. Motor noises would be audible at these locations, and thus the setting contains evidence of humans even when actual roads and trails are not visible. Existing utility lines are also visible from many of the same locations that the proposed transmission line would be visible from. The Mitchell Alternative would cross areas where existing utility lines are not visible, such as the Mitchell Canyon area. However, existing components of transportation networks are visible in these areas. Increases in the evidence of humans from the Mitchell Alternative would be in addition to the existing evidence of humans from these other past and present actions. The increased evidence of humans resulting from the Mitchell Alternative would have a small but measureable incremental effect on the cumulative conditions. Therefore, the cumulative impact of the Mitchell Alternative would be minor.

The Mitchell Alternative would require the removal of the approximately 28.2 acres of forestland within the ROW/easement area for the proposed transmission line. Approximately 26.5 acres of the forestland occur on NFS land. Removal of forestland would change the recreation setting in

these areas to shrubland and would also create a cleared corridor through the surrounding forestland cover on either side of the ROW/easement area. The existing transportation networks and utilities lines in the CIAA have resulted in similar removal of forestland and cleared corridors. As described, sections of the proposed transmission line that would cross NFS land are within 0.5 mile or closer to one or more existing roads or trails. This includes sections that would cross NFS land where forestland cover is present. The impacts of removal of forestland cover resulting from the Mitchell Alternative and the existing removal that has occurred from the other past, present, and reasonably foreseeable future actions in the CIAA would be cumulatively considerable to recreation resources. The cumulative impact on NFS land would be moderate due to relatively large area of forestland which would be removed. The impact would be moderate because the incremental effect on the cumulative conditions of the recreation setting relative to forestland cover would be moderate and readily measureable. There would be no cumulative impact on BLM-administered public lands in the CIAA because these lands do not contain forestland.

4.3.3 Peavine Alternative

Construction activities associated with the Peavine Alternative would result in temporary increases of traffic congestion or delays on existing roads and motorized trails used for construction access. If maintenance or repair of roads and motorized trails in the existing transportation networks occur within the CIAA and at the same time as construction of the proposed project, the resulting impacts would be cumulatively considerable to recreation resources. The cumulative impact would be negligible because construction would be temporary and maintenance of the proposed project would not be expected to cause meaningful traffic congestion or delays. The temporary, brief duration of construction would make it unlikely for very many existing roads or trails in the transportation networks to undergo repair or maintenance at the same time.

As described in **Section 3.2.3.1**, temporary new access roads that are installed to facilitate project construction and, depending on the location of the road, potential project maintenance may be used for unauthorized motorized recreation. Unauthorized motorized recreation would contribute to the degradation of non-motorized recreational opportunities. From a cumulative perspective, the existing transportation networks within the CIAA have resulted in the construction of many roads and motorized trails, some of which inevitably facilitate unauthorized motorized recreation or unmanaged recreational uses. Therefore, any additional unauthorized motorized recreation that occurs specifically from temporary new access roads constructed for the proposed project would be cumulatively considerable. The proposed project includes design features that would help to reduce the proposed project's incremental contribution to unauthorized motorized recreation uses within the CIAA. The Peavine Alternative includes design features that would help to reduce the proposed project's incremental contribution to unauthorized motorized

recreation uses within the CIAA. The cumulative impact of the Peavine Alternative would be minor because there would be small changes to the existing cumulative conditions associated with unauthorized motorized use within the CIAA. The design feature requiring monitoring of temporary restored access roads by USFS OHV rangers if unauthorized use occurs would limit the cumulative impact to short-term.

The proposed project would increase the evidence of humans in the CIAA due to visibility of the proposed transmission line, and from corona noise. Evidence would also increase temporary during construction due to visibility of construction equipment and crews, and from noise produced from construction equipment. From a cumulative perspective, most of the area within the CIAA contains some evidence of humans in the form of existing roads or motorized trails. Locations from which existing transportation networks cannot be seen are generally within 0.5 mile or closer to the nearest road or trail. Motor noises would be audible at these locations, and thus the setting contains evidence of humans even when actual roads and trails are not visible. Existing utility lines are also visible from many of the same locations that the proposed transmission line would be visible from. The Peavine Alternative would cross areas where existing utility lines are not visible, such as the Mitchell Canyon area. However, existing components of transportation networks are visible in these areas. Increases in the evidence of humans from the Peavine Alternative would be in addition to the existing evidence of humans from these other past and present actions. The increased evidence of humans resulting from the Peavine Alternative would have a small but measureable incremental effect on the cumulative conditions. Therefore, the cumulative impact of the Peavine Alternative would be minor.

The Peavine Alternative would require the removal of the approximately 20.6 acres of forestland within the ROW/easement area for the proposed transmission line. Approximately 16.9 acres of the forestland occur on NFS land. Removal of forestland would change the recreation setting in these areas to shrubland and would also create a cleared corridor through the surrounding forestland cover on either side of the ROW/easement area. The existing transportation networks and utilities lines in the CIAA have resulted in similar removal of forestland and cleared corridors. As described, sections of the proposed transmission line that would cross NFS land are within 0.5 mile or closer to one or more existing roads or trails. This includes sections that would cross NFS land where forestland cover is present. The impacts of removal of forestland cover resulting from the Peavine Alternative and the existing removal that has occurred from the other past, present, and reasonably foreseeable future actions in the CIAA would be cumulatively considerable to recreation resources. The cumulative impact on NFS land would be moderate because the incremental effect of removal of approximately 16.9 acres of forestland on the cumulative conditions of the recreation setting would be readily measureable. There would be no cumulative impact on BLM-administered public land in the CIAA because it does not contain any forestland.

4.3.4 Poeville Alternative

Construction of the Poeville Alternative would result in temporary increases of traffic congestion or delays on existing roads and motorized trails that are used for construction access. Increased traffic or delays would temporarily disrupt recreation opportunities. If maintenance or repair of other roads and motorized trails in the existing transportation networks occurs at the same time as construction of the proposed project, the resulting impacts would be cumulatively considerable to recreation resources. The cumulative impact would be negligible because project construction would be temporary and would only affect a small fraction of the total roads in the CIAA. The temporary duration of project construction would make it unlikely for very many existing roads or trails in the transportation networks to undergo repair or maintenance at the same time as project construction.

As described in **Section 3.2.4.1**, temporary new access roads that are constructed specifically for construction of the Poeville Alternative may be used for unauthorized motorized recreation following construction and restoration. Unauthorized motorized recreation would contribute to the long-term degradation of non-motorized recreational opportunities. From a cumulative perspective, the existing transportation networks within the CIAA have resulted in the construction of many roads and motorized trails, some of which inevitably facilitate unauthorized motorized recreation or unmanaged recreational uses. Therefore, any additional unauthorized motorized recreation that occurs specifically from temporary new access roads would be cumulatively considerable with existing unauthorized motorized recreation. The proposed project includes design features that would help to reduce the proposed project's incremental contribution to unauthorized motorized recreation uses within the CIAA. Additionally, the most of the sections of the Poeville Alternative that would cross NFS land are located next to Peavine Peak Road or an existing road beneath an overhead power line. These existing roads would facilitate construction and maintenance of these sections of the proposed transmission line and would reduce the number of temporary new access roads required on NFS land. The cumulative impact of the Poeville Alternative would be negligible because there would be no meaningful or measureable change in the existing cumulative conditions associated with unauthorized motorized use within the CIAA. The design feature requiring monitoring of temporary restored access roads by USFS OHV rangers if unauthorized use occurs would limit the negligible cumulative impact to short-term.

The Poeville Alternative would affect recreation setting and experiences by increasing the evidence of humans and diminishing the ability for recreationists to surround themselves with natural sights and sounds. Increases in evidence of humans would result from visibility of construction equipment and crews and visibility of the proposed transmission line. Evidence of humans would also increase from corona noise produced along the proposed overhead

conductors. From a cumulative perspective, the recreation setting within most of the CIAA is characterized by some evidence of humans due to either or both of the past and present actions discussed in **Section 4.2**. Both existing roads and trails and existing utility lines are readily visible from the NFS land that would be crossed by the Poeville Alternative. In addition to existing transportation networks and utility lines, other types of human evidence is also readily apparent from affected NFS land, including residential structures, bulk water tanks, fences, and so forth. The resulting impacts of increases in evidence of humans from the Poeville Alternative and the existing evidence of humans from the other past, present, and reasonably foreseeable future actions in the CIAA would be cumulatively considerable to recreation resources. The cumulative impact on NFS land would be negligible because there would be no measureable changes to the existing cumulative conditions of the recreation setting and experiences associated with evidence of humans and natural sights and sounds. The cumulative impact on BLM-administered public land would also be negligible because the existing cumulative conditions of the recreation settings on BLM-administered public land are characterized by existing overhead power lines and roads.

4.3.5 Peavine/Poeville Alternative

Construction of the Peavine/Poeville Alternative would result in temporary increases of traffic congestion or delays on existing roads and motorized trails that are used for construction access. Increased traffic or delays would temporarily disrupt recreation opportunities. If maintenance or repair of other roads and motorized trails in the existing transportation networks within the CIAA occurs at the same time as construction of the proposed project, the resulting impacts would be cumulatively considerable to recreation resources. The cumulative impact would be negligible because project construction would be temporary and would only affect a small fraction of the total roads in the CIAA. The temporary duration of project construction would make it unlikely for very many other existing roads or trails in the CIAA to undergo repair or maintenance at the same time as project construction.

As described in **Section 3.2.5.1**, temporary new access roads that are constructed specifically for construction of the Peavine/Poeville Alternative may be used for unauthorized motorized recreation following construction and restoration. Unauthorized motorized recreation would contribute to the degradation of non-motorized recreational opportunities. From a cumulative perspective, the existing transportation networks within the CIAA have resulted in the construction of many roads and motorized trails, some of which inevitably facilitate unauthorized motorized recreation or unmanaged recreational uses of NFS land. Therefore, any additional unauthorized motorized recreation that occurs on NFS land specifically from temporary new access roads would be cumulatively considerable with existing unauthorized motorized recreation. The proposed project includes design features that would help to reduce the proposed project's incremental contribution to unauthorized motorized recreation uses within

the CIAA. The cumulative impact of the Peavine/Poeville Alternative would be minor because there would be small changes to the existing cumulative conditions associated with unauthorized motorized use within the CIAA. The design feature requiring monitoring of temporary restored access roads by USFS OHV rangers if unauthorized use occurs would limit the cumulative impact to short-term.

The Peavine/Poeville Alternative would affect recreation setting and experiences by increasing the evidence of humans and diminishing the ability for recreationists to surround themselves with natural sights and sounds. Increases in evidence of humans would result from visibility of construction equipment and crews and visibility of the proposed transmission line. Evidence of humans would also increase from corona noise produced along the proposed overhead conductors. From a cumulative perspective, the recreation setting within most of the CIAA is characterized by some evidence of humans due to either or both of the past and present actions discussed in **Section 4.2**. There are one or more existing roads or motorized trails within 0.5 mile or closer to the NFS land that would be crossed by the Peavine/Poeville Alternative. The resulting impacts of increases in evidence of humans from the Peavine/Poeville Alternative and the existing evidence of humans from the other past, present, and reasonably foreseeable future actions in the CIAA would be cumulatively considerable to recreation resources. The cumulative impact on NFS land would be minor. The impact would be minor because the incremental effect on the cumulative conditions of the recreation setting relative to evidence of humans would be small but measureable. The cumulative impact on BLM-administered public lands would be negligible because the existing cumulative condition of the recreation setting on BLM-administered public lands is characterized by existing roads, the Bordertown Substation, and the Alturas 345 kV transmission line.

The Peavine/Poeville Alternative would require the removal of the approximately 12.3 acres of forestland that occurs within the ROW/easement area for the proposed transmission line. Removal of forestland cover would change the recreation setting to shrubland and would also create a cleared corridor through the surrounding forestland cover on either side of the ROW/easement area. The existing transportation networks and utilities lines in the CIAA have resulted in similar removal of forestland and cleared corridors. The resulting impacts of removal of forestland cover from the Peavine/Poeville Alternative and the existing removal that has occurred from the other past, present, and reasonably foreseeable future actions in the CIAA would be cumulatively considerable to recreation resources. The cumulative impact on NFS land would be minor. The impact would be minor because the incremental effect on the cumulative conditions of the recreation setting relative to forestland cover would be small but measureable. There would be no cumulative impact on BLM-administered public lands in the CIAA because the these lands do not contain forestland.

5.0 COMPARISON OF ALTERNATIVES

This section provides a summary of the expected effects on recreation resources from implementation of each action alternative. **Table 19** presents the summary of direct and indirect effects that each action alternative would have on the three effects indicators during construction and operation and maintenance, as analyzed and discussed in **Section 3.0**. A summary of the cumulative impacts analyzed and disclosed in **Section 4.0** for each action alternative are presented in **Table 20**. The No Action Alternative is not included in either table because it would have no direct or indirect effects or cumulative impacts on recreation resources.

Table 19 Summary of Direct and Indirect Effects of Action Alternatives

Alternative	Construction Impacts			Operation and Maintenance Impacts		Compliance with Forest Plan
	Traffic Delays	Visual and Noise Disruption	Unauthorized OHV Recreation	Visual and Noise Disruption	Forestland Clearing	
Mitchell	Negligible and temporary impacts	Minor and temporary impacts on non-motorized recreation; negligible and temporary impacts on motorized recreation	Moderate impacts; design feature requiring USFS OHV ranger monitoring would limit impacts to short term	Long-term minor impacts, except for the section that would be next to the existing #102 transmission line; impacts along this section and the section that would cross BLM-administered public lands would be long term and negligible	Moderate, long-term impacts within study area; minor, long-term impacts outside of study area, as it relates to visual	Compliant; no impact
Peavine	Negligible and temporary impacts	Minor and temporary impacts on non-motorized recreation; negligible and temporary impacts on motorized recreation	Moderate impacts; design feature requiring USFS OHV ranger monitoring would limit impacts to short term	Long-term minor impacts, except for the section that would be next to the existing #102 transmission line; impacts along this section and the section that would cross BLM-administered public lands would be long term and negligible	Moderate, long-term impacts within study area; minor, long-term impacts outside of study area, as it relates to visual	Compliant; no impact
Poeville	Negligible and temporary impacts	Negligible, temporary impacts on motorized and non-motorized recreation	Negligible and temporary impacts	Long-term negligible impacts	No impact on NFS land or BLM-administered public lands	Compliant; no impact
Peavine/Poeville	Negligible and temporary impacts	Minor and temporary impacts on non-motorized recreation; negligible and temporary impacts on motorized recreation	Moderate impacts; design feature requiring USFS OHV ranger monitoring would limit impacts to short term	Long-term impacts; minor on NFS land and negligible on BLM-administered public lands	Minor and long term impacts within study area; minor and long term impacts outside of study area as it relates to visual	Compliant; no impact

Table 20 Summary of Cumulative Impacts of Action Alternatives

Alternative	Cumulative Impacts			
	Traffic-Related	Unauthorized OHV Recreation	Visual and Noise Disruption	Forestland Clearing
Mitchell	Negligible and temporary cumulative impacts	Minor and short-term cumulative impacts	Minor and long term cumulative impacts	Moderate and long-term on NFS land; no cumulative impacts on BLM-administered public lands
Peavine	Negligible and temporary cumulative impacts	Minor and short-term cumulative impacts	Minor and long term cumulative impacts	Moderate and long-term on NFS land; no cumulative impacts on BLM-administered public lands
Poeville	Negligible and temporary cumulative impacts	Negligible and short-term cumulative impacts	Negligible and long term cumulative impacts	No cumulative impact on NFS land or BLM-administered public lands
Peavine/Poeville	Negligible and temporary cumulative impacts	Minor and short-term cumulative impacts	Minor and long term cumulative impacts	Minor and long-term on NFS land; no cumulative impacts on BLM-administered public lands

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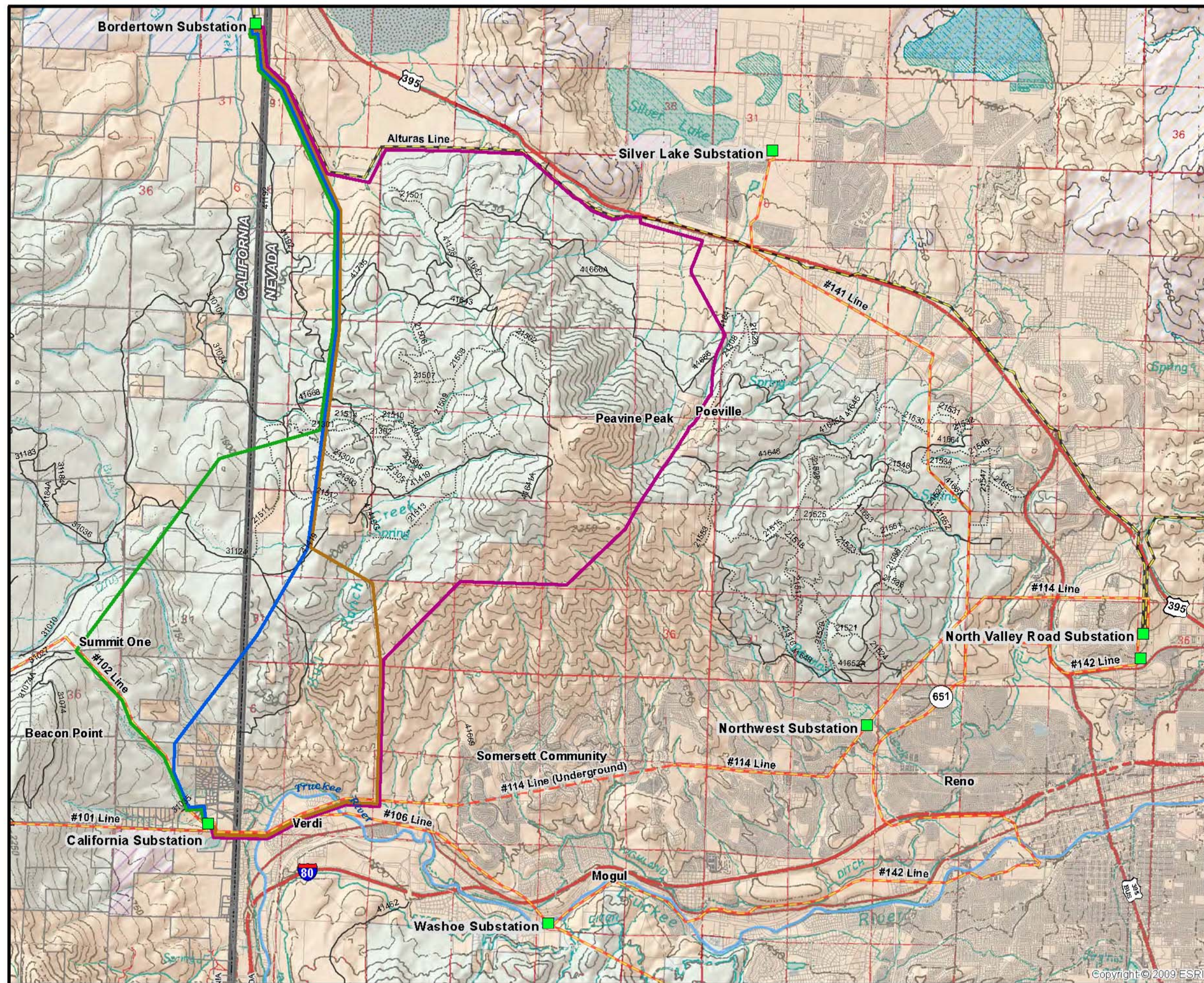
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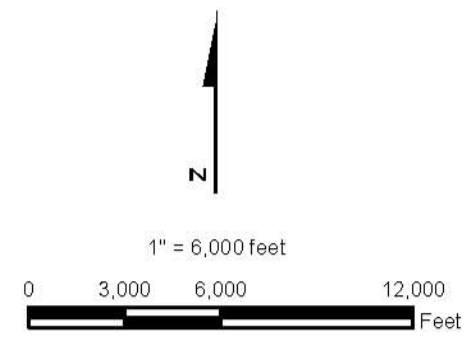
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FIGURES



- Legend**
- Transmission Line Alternatives**
- Mitchell
 - Peavine
 - Poeville
 - Peavine/Poeville
- Existing Features**
- 120 kV Transmission Line
 - Underground 120 kV Transmission Line
 - 345 kV Transmission Line
 - Substation
 - USFS Roads
 - USFS Trails
- Land Ownership**
- U.S. FOREST SERVICE
 - PRIVATE LAND
 - CALIFORNIA DEPT. OF FISH AND WILDLIFE
 - U.S. BUREAU OF LAND MANAGEMENT
 - U.S. DEPT. OF DEFENSE
 - U.S. BUREAU OF RECLAMATION

Note: Segments of Transmission Line Alternatives that appear parallel share the same alignment. Transmission lines are offset for visual purposes only.

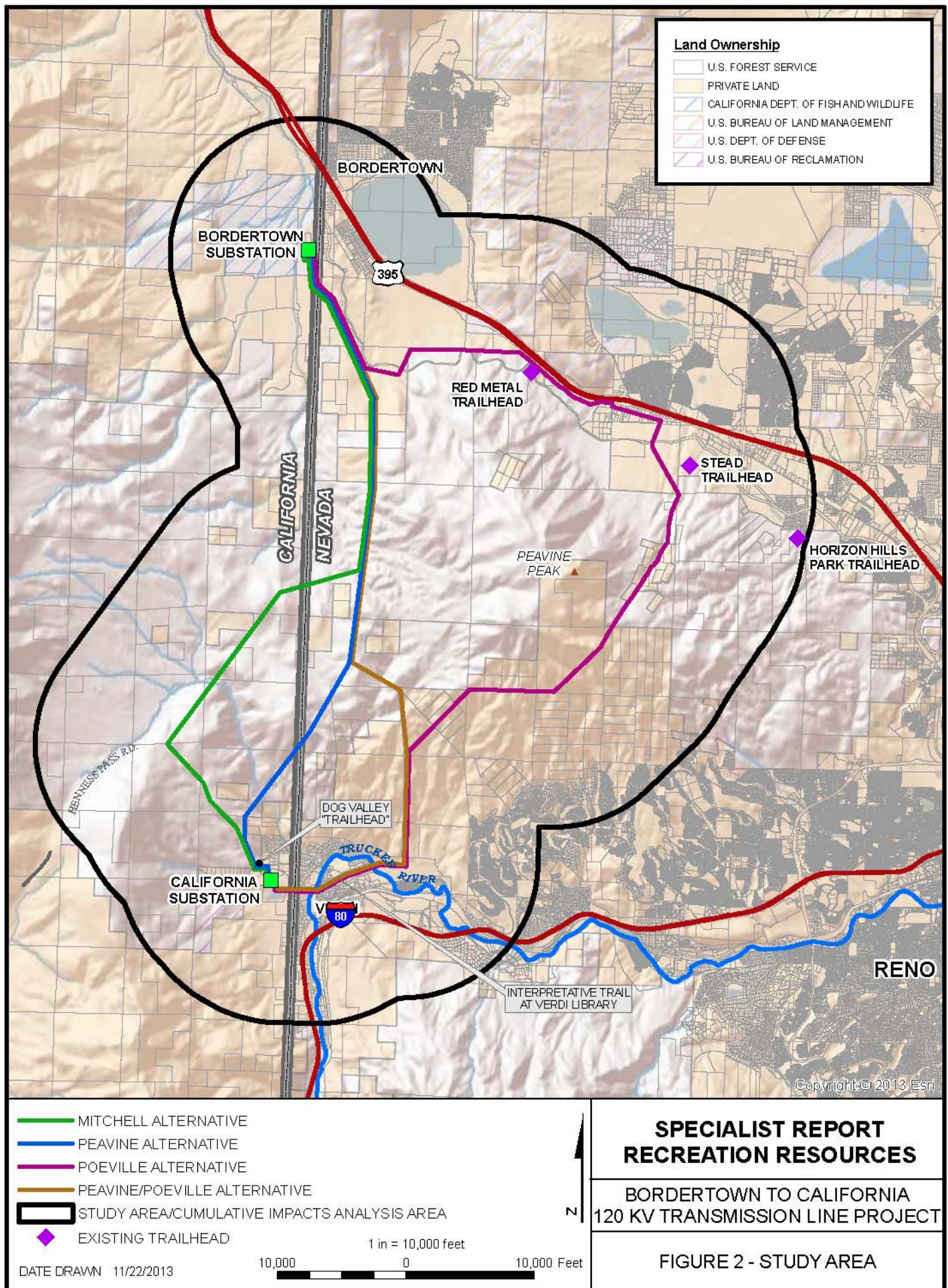


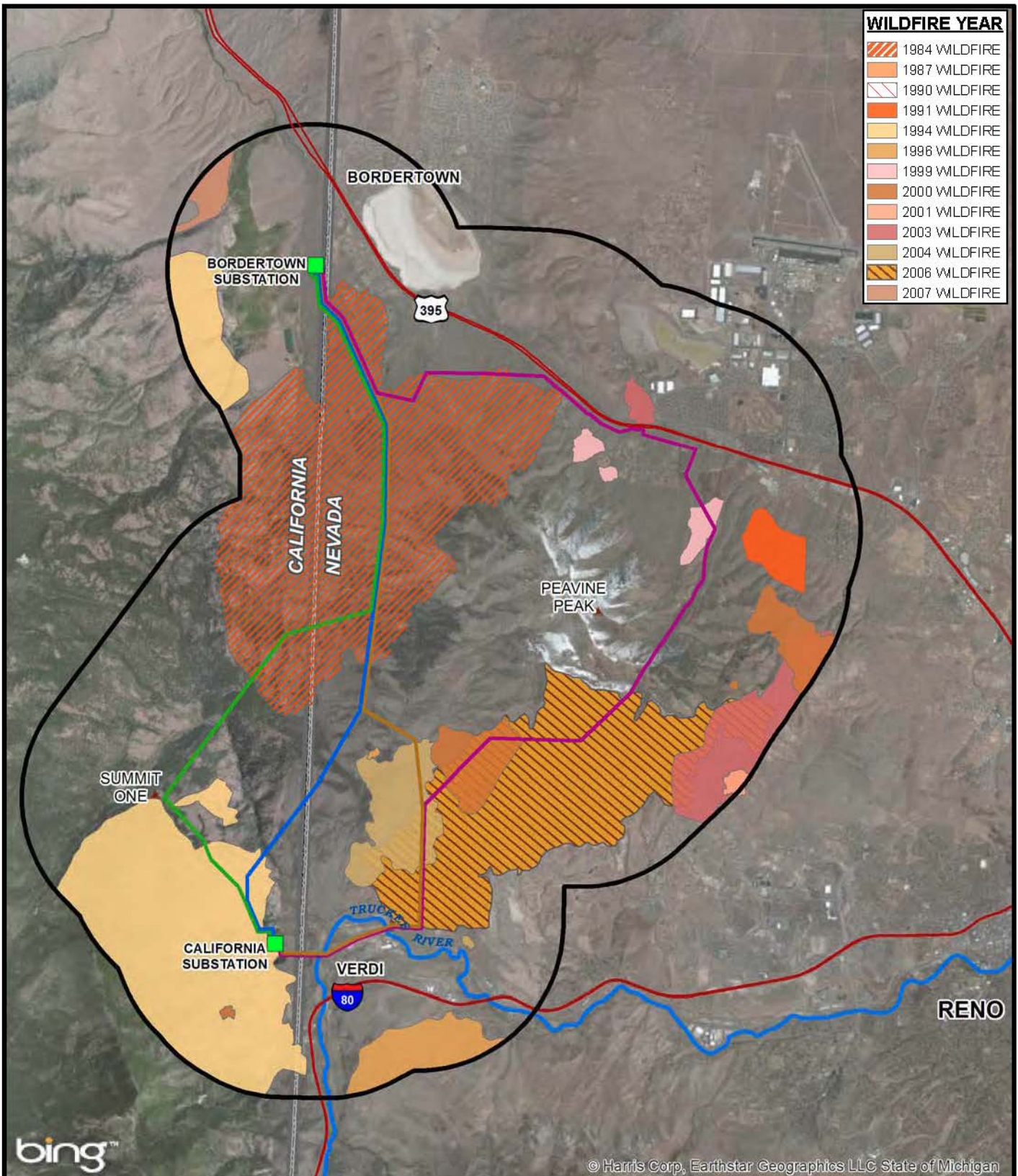
DATE DRAWN: 11/22/2013

SPECIALIST REPORT

BORDERTOWN TO CALIFORNIA
120 KV TRANSMISSION LINE PROJECT

FIGURE 1
OVERVIEW OF
ACTION ALTERNATIVES CONSIDERED





SPECIALIST REPORT RECREATION RESOURCES

BORDERTOWN TO CALIFORNIA
120 KV TRANSMISSION LINE PROJECT

FIGURE 3 - WILDFIRE MAP

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10,000 0 10,000 Feet
1 in = 10,000 feet